[redacted]

[redacted]

April 7, 2009 Analytical Report for Service Request No: K0902663

Fritz Grothkopp
King County Environmental Lab
322 W. Ewing St.
Seattle, WA 98119

**RE: King County Intercalibration Study/421973**

Dear Fritz:

Enclosed are the results of the samples submitted to our laboratory on March 27, 2009. For your reference, these analyses have been assigned our service request number K0902663.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at [redacted]. All results are intended to be considered in their entirety, and [redacted] is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please call if you have any questions. My extension is 3281. You may also contact me via Email at [redacted]

Respectfully submitted,

[redacted]

Project Chemist

PD/lb



NELAP Accredited ACIL Seal of Excellence Award 100% Recycled

## Acronyms

| | |
|---|---|
| ASTM | American Society for Testing and Materials |
| A2LA | American Association for Laboratory Accreditation |
| CARB | California Air Resources Board |
| CAS Number | Chemical Abstract Service registry Number |
| CFC | Chlorofluorocarbon |
| CFU | Colony-Forming Unit |
| DEC | Department of Environmental Conservation |
| DEQ | Department of Environmental Quality |
| DHS | Department of Health Services |
| DOE | Department of Ecology |
| DOH | Department of Health |
| EPA | U. S. Environmental Protection Agency |
| ELAP | Environmental Laboratory Accreditation Program |
| GC | Gas Chromatography |
| GC/MS | Gas Chromatography/Mass Spectrometry |
| LUFT | Leaking Underground Fuel Tank |
| M | Modified |
| MCL | Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA. |
| MDL | Method Detection Limit |
| MPN | Most Probable Number |
| MRL | Method Reporting Limit |
| NA | Not Applicable |
| NC | Not Calculated |
| NCASI | National Council of the Paper Industry for Air and Stream Improvement |
| ND | Not Detected |
| NIOSH | National Institute for Occupational Safety and Health |
| PQL | Practical Quantitation Limit |
| RCRA | Resource Conservation and Recovery Act |
| SIM | Selected Ion Monitoring |
| TPH | Total Petroleum Hydrocarbons |
| tr | Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL. |

## Inorganic Data Qualifiers

| | |
|---|---|
| * | The result is an outlier. See case narrative. |
| # | The control limit criteria is not applicable. See case narrative. |
| B | The analyte was found in the associated method blank at a level that is significant relative to the sample result. |
| E | The result is an estimate amount because the value exceeded the instrument calibration range. |
| J | The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL. |
| U | The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. |
| i | The MRL/MDL has been elevated due to a matrix interference. |
| X | See case narrative. |

## Metals Data Qualifiers

| | |
|---|---|
| # | The control limit criteria is not applicable. See case narrative. |
| B | The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL. |
| E | The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample. |
| M | The duplicate injection precision was not met. |
| N | The Matrix Spike sample recovery is not within control limits. See case narrative. |
| S | The reported value was determined by the Method of Standard Additions (MSA). |
| U | The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. |
| W | The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance. |
| i | The MRL/MDL has been elevated due to a matrix interference. |
| X | See case narrative. |
| * | The duplicate analysis not within control limits. See case narrative. |
| + | The correlation coefficient for the MSA is less than 0.995. |

## Organic Data Qualifiers

| | |
|---|---|
| * | The result is an outlier. See case narrative. |
| # | The control limit criteria is not applicable. See case narrative. |
| A | A tentatively identified compound, a suspected aldol-condensation product. |
| B | The analyte was found in the associated method blank at a level that is significant relative to the sample result. |
| C | The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data. |
| D | The reported result is from a dilution. |
| E | The result is an estimate amount because the value exceeded the instrument calibration range. |
| J | The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL. |
| N | The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed. |
| P | The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results (25% for CLP Pesticides). |
| U | The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. |
| i | The MRL/MDL has been elevated due to a chromatographic interference. |
| X | See case narrative. |

## Additional Petroleum Hydrocarbon Specific Qualifiers

| | |
|---|---|
| F | The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard. |
| L | The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard. |
| H | The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard. |
| O | The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard. |
| Y | The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard. |
| Z | The chromatographic fingerprint does not resemble a petroleum product. |

[redacted]

## State Certifications, Accreditations, and Licenses

| Program | Number |
|---|---|
| Alaska DEC UST | [redacted] |
| Arizona DHS | |
| Arkansas - DEQ | |
| California DHS | |
| Colorado DPHE | |
| Florida DOH | |
| Hawaii DOH | |
| Idaho DHW | |
| Indiana DOH | |
| Louisiana DEQ | |
| Louisiana DHH | |
| Maine DHS | |
| Michigan DEQ | |
| Minnesota DOH | |
| Montana DPHHS | |
| Nevada DEP | |
| New Jersey DEP | |
| New Mexico ED | |
| North Carolina DWQ | |
| Oklahoma DEQ | |
| Oregon - DHS | |
| South Carolina DHEC | |
| Utah DOH | |
| Washington DOE | |
| Wisconsin DNR | |
| Wyoming (EPA Region 8) | |

# Case Narrative

[redacted]

| | | | |
|---|---|---|---|
| **Client:** | King County Environmental Lab | **Service Request No.:** | K0902663 |
| **Project:** | King County Inter-calibration Study | **Date Received:** | 03/27/2009 |
| **Sample Matrix:** | Water | | |

## CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of [redacted]. This report contains analytical results for samples designated for Tier III validation deliverables including summary forms and all of the associated raw data for each of the analyses. When appropriate to the method, method blank results have been reported with each analytical test.

**Sample Receipt**

Twelve water samples were received for analysis at [redacted] on 03/27/2009 and were split into thirty six samples per instruction from the client. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

**General Chemistry Parameters**

No anomalies associated with the analysis of these samples were observed.

**Total and Dissolved Metals**

No anomalies associated with the analysis of these samples were observed.

04/07/09

**Approved by**_____ **Date**_____

# Chain of Custody Documentation

EL-09-14

KING COUNTY ENVIRONMENTAL LABORATORY 322 West Ewing Street Seattle, WA 98119

# LABORATORY WORK ORDER

Project Name: King County Intercalibration Study

Project Number: 421973

Samplers:_____ Laboratory Project Manager: Fritz Grothkopp

| | | | | Parameters | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample # | Locator | Matrix | Collect Date | Total Cu, Pb, Zn | Total Mercury | Dissolved Cu, Pb, Zn | Dissolved Mercury | Hardness | | | | No. of Containers | Notes |
| L47479-1 | Ewing St. | Water | 25-Mar-09 | x | | | | x | | | | | Aliquot 1 |
| L47479-2 | Ewing St. | Water | 25-Mar-09 | x | | | | x | | | | | Aliquot 2 |
| L47479-3 | Ewing St. | Water | 25-Mar-09 | x | | | | x | | | | | Aliquot 3 |
| L47479-4 | Ewing St. | Water | 25-Mar-09 | | x | | | | | | | | Aliquot 1 |
| L47479-5 | Ewing St. | Water | 25-Mar-09 | | x | | | | | | | | Aliquot 2 |
| L47479-6 | Ewing St. | Water | 25-Mar-09 | | x | | | | | | | | Aliquot 3 |
| L47479-7 | GL2-3 | Water | 25-Mar-09 | x | | | | x | | | | | Aliquot 1 |
| L47479-8 | GL2-3 | Water | 25-Mar-09 | x | | | | x | | | | | Aliquot 2 |
| L47479-9 | GL2-3 | Water | 25-Mar-09 | x | | | | x | | | | | Aliquot 3 |
| L47479-10 | GL2-3 | Water | 25-Mar-09 | | x | | | | | | | | Aliquot 1 |
| L47479-11 | GL2-3 | Water | 25-Mar-09 | | x | | | | | | | | Aliquot 2 |
| L47479-12 | GL2-3 | Water | 25-Mar-09 | | x | | | | | | | | Aliquot 3 |
| L47479-13 | C370 | Water | 25-Mar-09 | x | | | | x | | | | | Aliquot 1 |
| L47479-14 | C370 | Water | 25-Mar-09 | x | | | | x | | | | | Aliquot 2 |
| L47479-15 | C370 | Water | 25-Mar-09 | x | | | | x | | | | | Aliquot 3 |
| L47479-16 | C370 | Water | 25-Mar-09 | | x | | | | | | | | Aliquot 1 |
| L47479-17 | C370 | Water | 25-Mar-09 | | x | | | | | | | | Aliquot 2 |
| L47479-18 | C370 | Water | 25-Mar-09 | | x | | | | | | | | Aliquot 3 |
| L47479-19 | Ewing St. | Water | 25-Mar-09 | | | x | | | | | | | Aliquot 1 |
| L47479-20 | Ewing St. | Water | 25-Mar-09 | | | x | | | | | | | Aliquot 2 |
| L47479-21 | Ewing St. | Water | 25-Mar-09 | | | x | | | | | | | Aliquot 3 |
| L47479-22 | Ewing St. | Water | 25-Mar-09 | | | | x | | | | | | Aliquot 1 |
| L47479-23 | Ewing St. | Water | 25-Mar-09 | | | | x | | | | | | Aliquot 2 |
| L47479-24 | Ewing St. | Water | 25-Mar-09 | | | | x | | | | | | Aliquot 3 |
| L47479-25 | GL2-3 | Water | 25-Mar-09 | | | x | | | | | | | Aliquot 1 |
| L47479-26 | GL2-3 | Water | 25-Mar-09 | | | x | | | | | | | Aliquot 2 |
| L47479-27 | GL2-3 | Water | 25-Mar-09 | | | x | | | | | | | Aliquot 3 |
| L47479-28 | GL2-3 | Water | 25-Mar-09 | | | | x | | | | | | Aliquot 1 |
| L47479-29 | GL2-3 | Water | 25-Mar-09 | | | | x | | | | | | Aliquot 2 |
| L47479-30 | GL2-3 | Water | 25-Mar-09 | | | | x | | | | | | Aliquot 3 |
| L47479-31 | C370 | Water | 25-Mar-09 | | | x | | | | | | | Aliquot 1 |
| L47479-32 | C370 | Water | 25-Mar-09 | | | x | | | | | | | Aliquot 2 |
| L47479-33 | C370 | Water | 25-Mar-09 | | | x | | | | | | | Aliquot 3 |
| L47479-34 | C370 | Water | 25-Mar-09 | | | | x | | | | | | Aliquot 1 |
| L47479-35 | C370 | Water | 25-Mar-09 | | | | x | | | | | | Aliquot 2 |
| L47479-36 | C370 | Water | 25-Mar-09 | | | | x | | | | | | Aliquot 3 |

Additional Comments: 14 day TAT

Total Number of Bottles:

| RELINQUISHED BY | | Date | RECEIVED BY | | Date |
|---|---|---|---|---|---|
| Signature | [signature] | 3-26-09 | Signature | [signature] | 3/27/09 1030 |
| Printed Name | Jason Kinnard | Time 1500 | Printed Name | [redacted] | Time |
| Organization | KCEL | | Organization | | |

[redacted]

PC PD

# Cooler Receipt and Preservation Form

Client / Project: King county environmental Service Request K09 O2663

Received: 3/27/09 Opened: 3-27-09 By: BT

1. Samples were received via? *US Mail* *Fed Ex* (UPS) *DHL* *GH* *GS* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) *Cooler* (Box) *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA Y (N) If yes, how many and where? _____
   If present, were custody seals intact? Y N If present, were they signed and dated? Y N
4. Is shipper's air-bill filed? If not, record air-bill number: 1Z8188770310048011 NA (Y) N
5. **Temperature of cooler(s) upon receipt (°C):** 12.6
   **Temperature Blank (°C):** N/A
   **Thermometer ID:** 247
6. If applicable, list Chain of Custody Numbers: _____
7. Packing material used. *Inserts* *Baggies* *Bubble Wrap* *Gel Packs* *Wet Ice* *Sleeves* (Other) peanuts
8. Were custody papers properly filled out (ink, signed, etc.)? NA (Y) N
9. **Did all bottles arrive in good condition (unbroken)?** *Indicate in the table below.* NA (Y) N
10. Were all sample labels complete (i.e analysis, preservation, etc.)? NA (Y) N
11. Did all sample labels and tags agree with custody papers? *Indicate in the table below* NA (Y) N
12. **Were appropriate bottles/containers and volumes received for the tests indicated?** NA (Y) N
13. Were the pH-preserved bottles tested* received at the appropriate pH? *Indicate in the table below* NA (Y) N
14. Were VOA vials and 1631 Mercury bottles received without headspace? *Indicate in the table below.* (NA) Y N
15. **Are CWA Microbiology samples received with >1/2 the 24hr. hold time remaining from collection?** (NA) Y N
16. Was C12/Res negative? (NA) Y N

| Sample ID on Bottle | Sample ID on COC | Sample ID on Bottle | Sample ID on COC |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |

| Sample ID | Bottle Count Bottle Type | Out of Temp | Head-space | Broke | pH | Reagent | Volume added | Reagent Lot Number | Initials | Time |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

*Does not include all pH preserved sample aliquots received. See sample receiving SOP (SMO-GEN).

*Additional Notes, Discrepancies, & Resolutions:* _____

# General Chemistry Parameters

[redacted]

Analytical Report

**Client :** King County Environmental Lab
**Project Name :** King County Intercalibration Study
**Project Number :** 421973
**Sample Matrix :** WATER

**Service Request :** K0902663
**Date Collected :** 03/25/09
**Date Received :** 03/27/09

Hardness, Total as CaCO3

Units : mg/L
Basis : NA

Analysis Method SM 2340 C
Test Notes :

| Sample Name | Lab Code | MRL | MDL | Dilution Factor | Date Analyzed | Result | Result Notes |
|---|---|---|---|---|---|---|---|
| L47479-1 | K0902663-001 | 2 | 0.9 | 1 | 03/30/09 | 14 | |
| L47479-2 | K0902663-002 | 2 | 0.9 | 1 | 03/30/09 | 14 | |
| L47479-3 | K0902663-003 | 2 | 0.9 | 1 | 03/30/09 | 14 | |
| L47479-7 | K0902663-007 | 2 | 0.9 | 1 | 03/30/09 | 55 | |
| L47479-8 | K0902663-008 | 2 | 0.9 | 1 | 03/30/09 | 54 | |
| L47479-9 | K0902663-009 | 2 | 0.9 | 1 | 03/30/09 | 55 | |
| L47479-13 | K0902663-013 | 2 | 0.9 | 1 | 03/30/09 | 126 | |
| L47479-14 | K0902663-014 | 2 | 0.9 | 1 | 03/30/09 | 126 | |
| L47479-15 | K0902663-015 | 2 | 0.9 | 1 | 03/30/09 | 127 | |
| Method Blank | K0902663-MB | 2 | 0.9 | 1 | 03/30/09 | ND | |

SM Standard Methods for the Examination of Water and Wastewater, 20th Ed., 1998.

QA/QC Report

| | | | |
|---|---|---|---|
| **Client :** | King County Environmental Lab | **Service Request :** | K0902663 |
| **Project Name :** | King County Intercalibration Study | **Date Collected :** | 3/25/2009 |
| **Project Number :** | 421973 | **Date Received :** | 3/27/2009 |
| **Sample Matrix :** | WATER | **Date Prepared :** | NA |
| | | **Date Analyzed :** | 03/30/09 |

Duplicate Summary
Inorganic Parameters

Sample Name : L47479-1
Lab Code : K0902663-001DUP
Test Notes :

Units : mg/L
Basis : NA

| Analyte | Analysis Method | MRL | Sample Result | Duplicate Sample Result | Average | Relative Percent Difference | Result Notes |
|---|---|---|---|---|---|---|---|
| Hardness, Total as CaCO3 | SM 2340 C | 2 | 14 | 14 | 14 | <1 | |

SM Standard Methods for the Examination of Water and Wastewater, 20th Ed., 1998.

[redacted]

QA/QC Report

| | | | |
|---|---|---|---|
| **Client :** | King County Environmental Lab | **Service Request :** | K0902663 |
| **Project Name :** | King County Intercalibration Study | **Date Collected :** | NA |
| **Project Number :** | 421973 | **Date Received :** | NA |
| **Sample Matrix :** | WATER | **Date Prepared :** | NA |
| | | **Date Analyzed :** | 03/30/09 |

Laboratory Control Sample Summary
Inorganic Parameters

| | | | |
|---|---|---|---|
| Sample Name : | Lab Control Sample | Units : | mg/L |
| Lab Code : | K0902663-LCS | Basis : | NA |
| Test Notes : | | | |

| Analyte | Prep Method | Analysis Method | True Value | Result | Percent Recovery | CAS Percent Recovery Acceptance Limits | Result Notes |
|---|---|---|---|---|---|---|---|
| Hardness, Total as CaCO3 | NONE | SM 2340 C | 88 | 91 | 103 | 85-115 | |

SM Standard Methods for the Examination of Water and Wastewater, 20th Ed., 1998.

Work Request # (Original K2407) K2479 K2483 K2552 K2600 K2663

Tier: II II A I III I D

Date Analyzed: 03/30/09

Analyst: Hanquw

Analysis: Hardness - SM 2340C

148186

## DATA QUALITY REPORT
## INORGANICS

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

| | | |
|---|---|---|
| 1. | Is the method name and number correct and appropriate? | yes/no/NA |
| 2. | Holding times met for all analyses and for all samples? | yes/no/NA |
| 3. | Are calculations correct? | yes/no/NA |
| 4. | Is the reporting basis correct? (Dry Weight) | yes/no/NA |
| 5. | All quality control criteria met? | yes/no/NA |
| a. | Is the calibration curve correlation coefficient ≥ 0.995? | yes/no/NA |
| b. | MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency? | yes/no/NA |
| c. | Are ICVs, CCVs, and CCBs all within acceptance limits? | yes/no/NA |
| d. | Are results for methods blanks all ND? | yes/no/NA |
| e. | Are all QC samples within acceptance criteria? (LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.) | yes/no/NA |
| f. | Are all exceptions explained? | yes/no/NA |
| 6. | Are all service requests that apply attached? | yes/no/NA |
| 7. | Are all samples labelled correctly? | yes/no/NA |
| 8. | Have all instructions on the service request been followed? (e.g. Special MRLs, QC on a specific sample) | yes/no/NA |
| 9. | Are detection limits and units reported correctly? | yes/no/NA |
| 10. | Are proper Analysis/Extraction stickers included on report? | yes/no/NA |
| 11. | Is the unused space on the benchsheet crossed out? | yes/no/NA |
| 12. | Was analysis turned in by the due date? (n-2) (If not record SR#) | yes/no/NA |

COMMENTS: K2552 - Rush - due date 04/07

Final Approved by: BH Date: 3/30/09

DQREPORT

[redacted]

Service Request #: K2407 K2479 K2483 K2552 K2600 K2663 Run#: 148186

Analysis For: Hardness Push (04/07) Method: EPA Method 130.2

| Sample Number | MB | LCS | K2407-1 | K2407-1d | K2479-10 | K2483-1 | K2552-1 | K2600-1 |
|---|---|---|---|---|---|---|---|---|
| Sample Volume (mL) | 50 | 25 | 25 | 25 | 2 | 5 | 25 | 25 |
| Titrant (mL) Start | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Stop | 0.04 | 2.28 | 0.82 | 0.80 | 1.84 | 1.52 | 2.13 | 0.23 |
| Net | 0.04 | 2.28 | 0.82 | 0.80 | 1.84 | 1.52 | 2.13 | 0.23 |
| Hardness (mg/L) | <0.9 | 91 | 33 | 32 | 920 | 304 | 85 | 9 |

| Sample Number | K2663-1 | K2663-1d | K2663-2 | K2663-3 | K2663-7 | K2663-8 | K2663-9 | K2663-~~19~~ 13 ② |
|---|---|---|---|---|---|---|---|---|
| Sample Volume (mL) | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| Titrant (mL) Start | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Stop | 0.35 | 0.36 | 0.35 | ① ~~0.00~~ 0.35 | 1.37 | 1.35 | 1.38 | 3.16 |
| Net | 0.35 | 0.36 | 0.35 | 0.35 | 1.37 | 1.35 | 1.38 | 3.16 |
| Hardness (mg/L) | 14 | 14 | 14 | 14 | 55 | 54 | 55 | 126 |

| Sample Number | K2663-~~20~~ 14 ② | K2663-~~21~~ 15 ② | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Sample Volume (mL) | 25 | 25 | | | | | | |
| Titrant (mL) Start | 0.00 | 0.00 | | | | | | |
| Stop | 3.15 | 3.18 | | | | | | |
| Net | 3.15 | 3.18 | | | | | | |
| Hardness (mg/L) | 126 | 127 | | | | | | |

**Standardization of 0.02 N EDTA** – 0.02

***Hardness as $CaCO_3$ (mg/L) =*** $\frac{A \times N \times 50{,}000}{\text{mL Sample Used}}$

| **mL 0.02 N Ca Solution** | | **mL EDTA Solution** |
|---|---|---|
| Trial 1 | 5 mL | 4.80 mL |
| Trial 2 | 5 mL | 4.84 mL |
| Trial 3 | 5 mL | 4.82 mL |

$\bar{x}$ = 4.82

A = mL of EDTA Titrant Used

APG #: 4053

Lot #: 123160-123161

True Value APG = 88

% Recovery = 103%

$N_{EDTA} = \frac{\text{mL Ca Solution}}{\text{mL EDTA Solution}} \times (0.02) = N_{EDTA}$

ID#: TX1-97-C

Comments:

K2407-1/1d $\bar{x}$ = 33 RPD = 3%

K2663-1/1d $\bar{x}$ = 14 RPD <1%

Analyst: [signature] Date: 03/30/09 TIME: 13:30

Reviewed By: SH Date: 3/31/09

① TH 03/30/09

② TH 03/30/09

HARDNESS.BCH

# Metals

[redacted]

- Cover Page -
# INORGANIC ANALYSIS DATA PACKAGE

**Client:** King County Environmental Lab
**Project Name:** King County Intercalibration Study
**Project No.:** 421973

**Service Request:** K0902663

| Sample Name: | Lab Code: |
|---|---|
| L47479-1 | K0902663-001 |
| L47479-1D | K0902663-001D |
| L47479-2 | K0902663-002 |
| L47479-3 | K0902663-003 |
| L47479-4 | K0902663-004 |
| L47479-4D | K0902663-004D |
| L47479-4S | K0902663-004S |
| L47479-5 | K0902663-005 |
| L47479-6 | K0902663-006 |
| L47479-7 | K0902663-007 |
| L47479-8 | K0902663-008 |
| L47479-9 | K0902663-009 |
| L47479-10 | K0902663-010 |
| L47479-11 | K0902663-011 |
| L47479-12 | K0902663-012 |
| L47479-13 | K0902663-013 |
| L47479-13S | K0902663-013S |
| L47479-14 | K0902663-014 |
| L47479-15 | K0902663-015 |
| L47479-16 | K0902663-016 |
| L47479-16D | K0902663-016D |
| L47479-16S | K0902663-016S |
| L47479-17 | K0902663-017 |
| L47479-18 | K0902663-018 |
| L47479-19 | K0902663-019 DISS |
| L47479-19D | K0902663-019D DISS |
| L47479-20 | K0902663-020 DISS |
| L47479-21 | K0902663-021 DISS |
| L47479-22 | K0902663-022 DISS |
| L47479-23 | K0902663-023 DISS |
| L47479-24 | K0902663-024 DISS |
| L47479-25 | K0902663-025 DISS |
| L47479-25S | K0902663-025S DISS |
| L47479-26 | K0902663-026 DISS |
| L47479-27 | K0902663-027 DISS |
| L47479-28 | K0902663-028 DISS |
| L47479-29 | K0902663-029 DISS |
| L47479-30 | K0902663-030 DISS |
| L47479-31 | K0902663-031 DISS |

**Comments:**

**Approved By:** _____ **Date:** 4/7/09

[redacted]

- Cover Page -
**INORGANIC ANALYSIS DATA PACKAGE**

**Client:** King County Environmental Lab
**Project Name:** King County Intercalibration Study
**Project No.:** 421973

**Service Request:** K0902663

| Sample Name: | Lab Code: |
|---|---|
| L47479-32 | K0902663-032 DISS |
| L47479-33 | K0902663-033 DISS |
| L47479-34 | K0902663-034 DISS |
| L47479-35 | K0902663-035 DISS |
| L47479-36 | K0902663-036 DISS |
| Method Blank | K0902663-MB |

**Comments:**

**Approved By:** _____ **Date:** 4/7/09

[redacted]

# Metals

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## INORGANIC ANALYSIS DATA PACKAGE

| | | | |
|---|---|---|---|
| **Client:** | King County Environmental Lab | **Service Request:** | K0902663 |
| **Project No.:** | 421973 | **Date Collected:** | 03/25/09 |
| **Project Name:** | King County Intercalibration Stu | **Date Received:** | 03/27/09 |
| **Matrix:** | WATER | **Units:** | ug/L |
| | | **Basis:** | N/A |

**Sample Name:** L47479-1 **Lab Code:** K0902663-001

| Analyte | Analysis Method | MRL | MDL | Dil. Factor | Date Extracted | Date Analyzed | Result | C | Q |
|---|---|---|---|---|---|---|---|---|---|
| Copper | 200.8 | 0.10 | 0.02 | 1.0 | 04/01/09 | 04/02/09 | 8.22 | | |
| Lead | 200.8 | 0.020 | 0.006 | 1.0 | 04/01/09 | 04/02/09 | 4.220 | | |
| Zinc | 200.8 | 0.50 | 0.08 | 1.0 | 04/01/09 | 04/02/09 | 36.1 | | |

**% Solids:** 0.0

Comments:

[redacted]

# Metals

- 1 -

## INORGANIC ANALYSIS DATA PACKAGE

| | | | |
|---|---|---|---|
| **Client:** | King County Environmental Lab | **Service Request:** | K0902663 |
| **Project No.:** | 421973 | **Date Collected:** | 03/25/09 |
| **Project Name:** | King County Intercalibration Stu | **Date Received:** | 03/27/09 |
| **Matrix:** | WATER | **Units:** | ug/L |
| | | **Basis:** | N/A |

**Sample Name:** L47479-2 **Lab Code:** K0902663-002

| Analyte | Analysis Method | MRL | MDL | Dil. Factor | Date Extracted | Date Analyzed | Result | C | Q |
|---|---|---|---|---|---|---|---|---|---|
| Copper | 200.8 | 0.10 | 0.02 | 1.0 | 04/01/09 | 04/02/09 | 8.39 | | |
| Lead | 200.8 | 0.020 | 0.006 | 1.0 | 04/01/09 | 04/02/09 | 4.250 | | |
| Zinc | 200.8 | 0.50 | 0.08 | 1.0 | 04/01/09 | 04/02/09 | 37.0 | | |

**% Solids:** 0.0

Comments:

[redacted]

# Metals

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## INORGANIC ANALYSIS DATA PACKAGE

| | | | |
|---|---|---|---|
| **Client:** | King County Environmental Lab | **Service Request:** | K0902663 |
| **Project No.:** | 421973 | **Date Collected:** | 03/25/09 |
| **Project Name:** | King County Intercalibration Stu | **Date Received:** | 03/27/09 |
| **Matrix:** | WATER | **Units:** | ug/L |
| | | **Basis:** | N/A |

**Sample Name:** L47479-3 **Lab Code:** K0902663-003

| Analyte | Analysis Method | MRL | MDL | Dil. Factor | Date Extracted | Date Analyzed | Result | C | Q |
|---|---|---|---|---|---|---|---|---|---|
| Copper | 200.8 | 0.10 | 0.02 | 1.0 | 04/01/09 | 04/02/09 | 8.11 | | |
| Lead | 200.8 | 0.020 | 0.006 | 1.0 | 04/01/09 | 04/02/09 | 4.110 | | |
| Zinc | 200.8 | 0.50 | 0.08 | 1.0 | 04/01/09 | 04/02/09 | 36.2 | | |

**% Solids:** 0.0

Comments:

[redacted]

# Metals

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## INORGANIC ANALYSIS DATA PACKAGE

| | | | |
|---|---|---|---|
| **Client:** | King County Environmental Lab | **Service Request:** | K0902663 |
| **Project No.:** | 421973 | **Date Collected:** | 03/25/09 |
| **Project Name:** | King County Intercalibration Stu | **Date Received:** | 03/27/09 |
| **Matrix:** | WATER | **Units:** | ug/L |
| | | **Basis:** | N/A |

**Sample Name:** L47479-4 **Lab Code:** K0902663-004

| Analyte | Analysis Method | MRL | MDL | Dil. Factor | Date Extracted | Date Analyzed | Result | C | Q |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | 245.1 | 0.20 | 0.05 | 1.0 | 03/30/09 | 03/31/09 | 0.05 | U | |

**% Solids:** 0.0

Comments:

# Metals

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## INORGANIC ANALYSIS DATA PACKAGE

| | | | |
|---|---|---|---|
| **Client:** | King County Environmental Lab | **Service Request:** | K0902663 |
| **Project No.:** | 421973 | **Date Collected:** | 03/25/09 |
| **Project Name:** | King County Intercalibration Stu | **Date Received:** | 03/27/09 |
| **Matrix:** | WATER | **Units:** | ug/L |
| | | **Basis:** | N/A |

**Sample Name:** L47479-5 **Lab Code:** K0902663-005

| Analyte | Analysis Method | MRL | MDL | Dil. Factor | Date Extracted | Date Analyzed | Result | C | Q |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | 245.1 | 0.20 | 0.05 | 1.0 | 03/30/09 | 03/31/09 | 0.05 | U | |

**% Solids:** 0.0

Comments:

# Metals

- 1 -

## INORGANIC ANALYSIS DATA PACKAGE

| | | | |
|---|---|---|---|
| **Client:** | King County Environmental Lab | **Service Request:** | K0902663 |
| **Project No.:** | 421973 | **Date Collected:** | 03/25/09 |
| **Project Name:** | King County Intercalibration Stu | **Date Received:** | 03/27/09 |
| **Matrix:** | WATER | **Units:** | ug/L |
| | | **Basis:** | N/A |

**Sample Name:** L47479-6 **Lab Code:** K0902663-006

| Analyte | Analysis Method | MRL | MDL | Dil. Factor | Date Extracted | Date Analyzed | Result | C | Q |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | 245.1 | 0.20 | 0.05 | 1.0 | 03/30/09 | 03/31/09 | 0.05 | U | |

**% Solids:** 0.0

Comments:

# Metals

- 1 -

## INORGANIC ANALYSIS DATA PACKAGE

| | | | |
|---|---|---|---|
| **Client:** | King County Environmental Lab | **Service Request:** | K0902663 |
| **Project No.:** | 421973 | **Date Collected:** | 03/25/09 |
| **Project Name:** | King County Intercalibration Stu | **Date Received:** | 03/27/09 |
| **Matrix:** | WATER | **Units:** | ug/L |
| | | **Basis:** | N/A |

**Sample Name:** L47479-7 **Lab Code:** K0902663-007

| Analyte | Analysis Method | MRL | MDL | Dil. Factor | Date Extracted | Date Analyzed | Result | C | Q |
|---|---|---|---|---|---|---|---|---|---|
| Copper | 200.8 | 0.10 | 0.02 | 1.0 | 04/01/09 | 04/02/09 | 30.5 | | |
| Lead | 200.8 | 0.020 | 0.006 | 1.0 | 04/01/09 | 04/02/09 | 24.8 | | |
| Zinc | 200.8 | 0.50 | 0.08 | 1.0 | 04/01/09 | 04/02/09 | 136 | | |

**% Solids:** 0.0

Comments:

# Metals

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## INORGANIC ANALYSIS DATA PACKAGE

| | | | |
|---|---|---|---|
| **Client:** | King County Environmental Lab | **Service Request:** | K0902663 |
| **Project No.:** | 421973 | **Date Collected:** | 03/25/09 |
| **Project Name:** | King County Intercalibration Stu | **Date Received:** | 03/27/09 |
| **Matrix:** | WATER | **Units:** | ug/L |
| | | **Basis:** | N/A |

**Sample Name:** L47479-8 **Lab Code:** K0902663-008

| Analyte | Analysis Method | MRL | MDL | Dil. Factor | Date Extracted | Date Analyzed | Result | C | Q |
|---|---|---|---|---|---|---|---|---|---|
| Copper | 200.8 | 0.10 | 0.02 | 1.0 | 04/01/09 | 04/02/09 | 30.5 | | |
| Lead | 200.8 | 0.020 | 0.006 | 1.0 | 04/01/09 | 04/02/09 | 24.5 | | |
| Zinc | 200.8 | 0.50 | 0.08 | 1.0 | 04/01/09 | 04/02/09 | 136 | | |

**% Solids:** 0.0

Comments:

[redacted]

# Metals

- 1 -

## INORGANIC ANALYSIS DATA PACKAGE

| | | | |
|---|---|---|---|
| **Client:** | King County Environmental Lab | **Service Request:** | K0902663 |
| **Project No.:** | 421973 | **Date Collected:** | 03/25/09 |
| **Project Name:** | King County Intercalibration Stu | **Date Received:** | 03/27/09 |
| **Matrix:** | WATER | **Units:** | ug/L |
| | | **Basis:** | N/A |

**Sample Name:** L47479-9 **Lab Code:** K0902663-009

| Analyte | Analysis Method | MRL | MDL | Dil. Factor | Date Extracted | Date Analyzed | Result | C | Q |
|---|---|---|---|---|---|---|---|---|---|
| Copper | 200.8 | 0.10 | 0.02 | 1.0 | 04/01/09 | 04/02/09 | 30.8 | | |
| Lead | 200.8 | 0.020 | 0.006 | 1.0 | 04/01/09 | 04/02/09 | 24.7 | | |
| Zinc | 200.8 | 0.50 | 0.08 | 1.0 | 04/01/09 | 04/02/09 | 138 | | |

**% Solids:** 0.0

Comments:

# Metals

- 1 -

## INORGANIC ANALYSIS DATA PACKAGE

| | | | |
|---|---|---|---|
| **Client:** | King County Environmental Lab | **Service Request:** | K0902663 |
| **Project No.:** | 421973 | **Date Collected:** | 03/25/09 |
| **Project Name:** | King County Intercalibration Stu | **Date Received:** | 03/27/09 |
| **Matrix:** | WATER | **Units:** | ug/L |
| | | **Basis:** | N/A |

**Sample Name:** L47479-10 **Lab Code:** K0902663-010

| Analyte | Analysis Method | MRL | MDL | Dil. Factor | Date Extracted | Date Analyzed | Result | C | Q |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | 245.1 | 0.20 | 0.05 | 1.0 | 03/30/09 | 03/31/09 | 0.05 | U | |

**% Solids:** 0.0

Comments:

# Metals

- 1 -

## INORGANIC ANALYSIS DATA PACKAGE

| | | | |
|---|---|---|---|
| **Client:** | King County Environmental Lab | **Service Request:** | K0902663 |
| **Project No.:** | 421973 | **Date Collected:** | 03/25/09 |
| **Project Name:** | King County Intercalibration Stu | **Date Received:** | 03/27/09 |
| **Matrix:** | WATER | **Units:** | ug/L |
| | | **Basis:** | N/A |

**Sample Name:** L47479-11 **Lab Code:** K0902663-011

| Analyte | Analysis Method | MRL | MDL | Dil. Factor | Date Extracted | Date Analyzed | Result | C | Q |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | 245.1 | 0.20 | 0.05 | 1.0 | 03/30/09 | 03/31/09 | 0.05 | U | |

**% Solids:** 0.0

Comments:

# Metals

- 1 -

## INORGANIC ANALYSIS DATA PACKAGE

| | | | |
|---|---|---|---|
| **Client:** | King County Environmental Lab | **Service Request:** | K0902663 |
| **Project No.:** | 421973 | **Date Collected:** | 03/25/09 |
| **Project Name:** | King County Intercalibration Stu | **Date Received:** | 03/27/09 |
| **Matrix:** | WATER | **Units:** | ug/L |
| | | **Basis:** | N/A |

**Sample Name:** L47479-12 **Lab Code:** K0902663-012

| Analyte | Analysis Method | MRL | MDL | Dil. Factor | Date Extracted | Date Analyzed | Result | C | Q |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | 245.1 | 0.20 | 0.05 | 1.0 | 03/30/09 | 03/31/09 | 0.05 | U | |

**% Solids:** 0.0

Comments:

[redacted]

# Metals

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## INORGANIC ANALYSIS DATA PACKAGE

| | | | |
|---|---|---|---|
| **Client:** | King County Environmental Lab | **Service Request:** | K0902663 |
| **Project No.:** | 421973 | **Date Collected:** | 03/25/09 |
| **Project Name:** | King County Intercalibration Stu | **Date Received:** | 03/27/09 |
| **Matrix:** | WATER | **Units:** | ug/L |
| | | **Basis:** | N/A |

**Sample Name:** L47479-13 **Lab Code:** K0902663-013

| Analyte | Analysis Method | MRL | MDL | Dil. Factor | Date Extracted | Date Analyzed | Result | C | Q |
|---|---|---|---|---|---|---|---|---|---|
| Copper | 200.8 | 0.10 | 0.02 | 1.0 | 04/01/09 | 04/02/09 | 2.60 | | |
| Lead | 200.8 | 0.020 | 0.006 | 1.0 | 04/01/09 | 04/02/09 | 1.830 | | |
| Zinc | 200.8 | 0.50 | 0.08 | 1.0 | 04/01/09 | 04/02/09 | 9.70 | | |

**% Solids:** 0.0

Comments:

[redacted]

# Metals

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## INORGANIC ANALYSIS DATA PACKAGE

| | | | |
|---|---|---|---|
| **Client:** | King County Environmental Lab | **Service Request:** | K0902663 |
| **Project No.:** | 421973 | **Date Collected:** | 03/25/09 |
| **Project Name:** | King County Intercalibration Stu | **Date Received:** | 03/27/09 |
| **Matrix:** | WATER | **Units:** | ug/L |
| | | **Basis:** | N/A |

**Sample Name:** L47479-14 **Lab Code:** K0902663-014

| Analyte | Analysis Method | MRL | MDL | Dil. Factor | Date Extracted | Date Analyzed | Result | C | Q |
|---|---|---|---|---|---|---|---|---|---|
| Copper | 200.8 | 0.10 | 0.02 | 1.0 | 04/01/09 | 04/02/09 | 2.57 | | |
| Lead | 200.8 | 0.020 | 0.006 | 1.0 | 04/01/09 | 04/02/09 | 1.800 | | |
| Zinc | 200.8 | 0.50 | 0.08 | 1.0 | 04/01/09 | 04/02/09 | 9.62 | | |

**% Solids:** 0.0

Comments:

# Metals

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## INORGANIC ANALYSIS DATA PACKAGE

| | | | |
|---|---|---|---|
| **Client:** | King County Environmental Lab | **Service Request:** | K0902663 |
| **Project No.:** | 421973 | **Date Collected:** | 03/25/09 |
| **Project Name:** | King County Intercalibration Stu | **Date Received:** | 03/27/09 |
| **Matrix:** | WATER | **Units:** | ug/L |
| | | **Basis:** | N/A |

**Sample Name:** L47479-15 **Lab Code:** K0902663-015

| Analyte | Analysis Method | MRL | MDL | Dil. Factor | Date Extracted | Date Analyzed | Result | C | Q |
|---|---|---|---|---|---|---|---|---|---|
| Copper | 200.8 | 0.10 | 0.02 | 1.0 | 04/01/09 | 04/02/09 | 2.53 | | |
| Lead | 200.8 | 0.020 | 0.006 | 1.0 | 04/01/09 | 04/02/09 | 1.830 | | |
| Zinc | 200.8 | 0.50 | 0.08 | 1.0 | 04/01/09 | 04/02/09 | 8.98 | | |

**% Solids:** 0.0

Comments:

# Metals

- 1 -

## INORGANIC ANALYSIS DATA PACKAGE

| | | | |
|---|---|---|---|
| **Client:** | King County Environmental Lab | **Service Request:** | K0902663 |
| **Project No.:** | 421973 | **Date Collected:** | 03/25/09 |
| **Project Name:** | King County Intercalibration Stu | **Date Received:** | 03/27/09 |
| **Matrix:** | WATER | **Units:** | ug/L |
| | | **Basis:** | N/A |

**Sample Name:** L47479-16 **Lab Code:** K0902663-016

| Analyte | Analysis Method | MRL | MDL | Dil. Factor | Date Extracted | Date Analyzed | Result | C | Q |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | 245.1 | 0.20 | 0.05 | 1.0 | 03/30/09 | 03/31/09 | 0.05 | U | |

**% Solids:** 0.0

Comments:

# Metals

- 1 -

## INORGANIC ANALYSIS DATA PACKAGE

| | | | |
|---|---|---|---|
| **Client:** | King County Environmental Lab | **Service Request:** | K0902663 |
| **Project No.:** | 421973 | **Date Collected:** | 03/25/09 |
| **Project Name:** | King County Intercalibration Stu | **Date Received:** | 03/27/09 |
| **Matrix:** | WATER | **Units:** | ug/L |
| | | **Basis:** | N/A |

**Sample Name:** L47479-17 **Lab Code:** K0902663-017

| Analyte | Analysis Method | MRL | MDL | Dil. Factor | Date Extracted | Date Analyzed | Result | C | Q |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | 245.1 | 0.20 | 0.05 | 1.0 | 03/30/09 | 03/31/09 | 0.05 | U | |

**% Solids:** 0.0

Comments:

# Metals

- 1 -

## INORGANIC ANALYSIS DATA PACKAGE

| | | | |
|---|---|---|---|
| **Client:** | King County Environmental Lab | **Service Request:** | K0902663 |
| **Project No.:** | 421973 | **Date Collected:** | 03/25/09 |
| **Project Name:** | King County Intercalibration Stu | **Date Received:** | 03/27/09 |
| **Matrix:** | WATER | **Units:** | ug/L |
| | | **Basis:** | N/A |

**Sample Name:** L47479-18 **Lab Code:** K0902663-018

| Analyte | Analysis Method | MRL | MDL | Dil. Factor | Date Extracted | Date Analyzed | Result | C | Q |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | 245.1 | 0.20 | 0.05 | 1.0 | 03/30/09 | 03/31/09 | 0.05 | U | |

**% Solids:** 0.0

Comments:

[redacted]

# Metals

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## INORGANIC ANALYSIS DATA PACKAGE

| | | | |
|---|---|---|---|
| **Client:** | King County Environmental Lab | **Service Request:** | K0902663 |
| **Project No.:** | 421973 | **Date Collected:** | 03/25/09 |
| **Project Name:** | King County Intercalibration Stu | **Date Received:** | 03/27/09 |
| **Matrix:** | WATER | **Units:** | ug/L |
| | | **Basis:** | N/A |

**Sample Name:** L47479-19 **Lab Code:** K0902663-019 DISS

| Analyte | Analysis Method | MRL | MDL | Dil. Factor | Date Extracted | Date Analyzed | Result | C | Q |
|---|---|---|---|---|---|---|---|---|---|
| Copper | 200.8 | 0.10 | 0.02 | 1.0 | 04/01/09 | 04/02/09 | 3.57 | | |
| Lead | 200.8 | 0.020 | 0.006 | 1.0 | 04/01/09 | 04/02/09 | 0.452 | | |
| Zinc | 200.8 | 0.50 | 0.08 | 1.0 | 04/01/09 | 04/02/09 | 14.0 | | |

**% Solids:** 0.0

Comments:

[redacted]

# Metals

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## INORGANIC ANALYSIS DATA PACKAGE

| | | | |
|---|---|---|---|
| **Client:** | King County Environmental Lab | **Service Request:** | K0902663 |
| **Project No.:** | 421973 | **Date Collected:** | 03/25/09 |
| **Project Name:** | King County Intercalibration Stu | **Date Received:** | 03/27/09 |
| **Matrix:** | WATER | **Units:** | ug/L |
| | | **Basis:** | N/A |

**Sample Name:** L47479-20 **Lab Code:** K0902663-020 DISS

| Analyte | Analysis Method | MRL | MDL | Dil. Factor | Date Extracted | Date Analyzed | Result | C | Q |
|---|---|---|---|---|---|---|---|---|---|
| Copper | 200.8 | 0.10 | 0.02 | 1.0 | 04/01/09 | 04/02/09 | 3.59 | | |
| Lead | 200.8 | 0.020 | 0.006 | 1.0 | 04/01/09 | 04/02/09 | 0.451 | | |
| Zinc | 200.8 | 0.50 | 0.08 | 1.0 | 04/01/09 | 04/02/09 | 14.5 | | |

**% Solids:** 0.0

Comments:

[redacted]

# Metals

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## INORGANIC ANALYSIS DATA PACKAGE

| | | | |
|---|---|---|---|
| **Client:** | King County Environmental Lab | **Service Request:** | K0902663 |
| **Project No.:** | 421973 | **Date Collected:** | 03/25/09 |
| **Project Name:** | King County Intercalibration Stu | **Date Received:** | 03/27/09 |
| **Matrix:** | WATER | **Units:** | ug/L |
| | | **Basis:** | N/A |

**Sample Name:** L47479-21 **Lab Code:** K0902663-021 DISS

| Analyte | Analysis Method | MRL | MDL | Dil. Factor | Date Extracted | Date Analyzed | Result | C | Q |
|---|---|---|---|---|---|---|---|---|---|
| Copper | 200.8 | 0.10 | 0.02 | 1.0 | 04/01/09 | 04/02/09 | 3.55 | | |
| Lead | 200.8 | 0.020 | 0.006 | 1.0 | 04/01/09 | 04/02/09 | 0.443 | | |
| Zinc | 200.8 | 0.50 | 0.08 | 1.0 | 04/01/09 | 04/02/09 | 13.6 | | |

**% Solids:** 0.0

Comments:

[redacted]

# Metals

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## INORGANIC ANALYSIS DATA PACKAGE

| | | | |
|---|---|---|---|
| **Client:** | King County Environmental Lab | **Service Request:** | K0902663 |
| **Project No.:** | 421973 | **Date Collected:** | 03/25/09 |
| **Project Name:** | King County Intercalibration Stu | **Date Received:** | 03/27/09 |
| **Matrix:** | WATER | **Units:** | ug/L |
| | | **Basis:** | N/A |

**Sample Name:** L47479-22 **Lab Code:** K0902663-022 DISS

| Analyte | Analysis Method | MRL | MDL | Dil. Factor | Date Extracted | Date Analyzed | Result | C | Q |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | 245.1 | 0.20 | 0.05 | 1.0 | 03/30/09 | 03/31/09 | 0.05 | U | |

**% Solids:** 0.0

Comments:

[redacted]

# Metals

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## INORGANIC ANALYSIS DATA PACKAGE

| | | | |
|---|---|---|---|
| **Client:** | King County Environmental Lab | **Service Request:** | K0902663 |
| **Project No.:** | 421973 | **Date Collected:** | 03/25/09 |
| **Project Name:** | King County Intercalibration Stu | **Date Received:** | 03/27/09 |
| **Matrix:** | WATER | **Units:** | ug/L |
| | | **Basis:** | N/A |

**Sample Name:** L47479-23 **Lab Code:** K0902663-023 DISS

| Analyte | Analysis Method | MRL | MDL | Dil. Factor | Date Extracted | Date Analyzed | Result | C | Q |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | 245.1 | 0.20 | 0.05 | 1.0 | 03/30/09 | 03/31/09 | 0.05 | U | |

**% Solids:** 0.0

Comments:

[redacted]

# Metals

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## INORGANIC ANALYSIS DATA PACKAGE

| | | | |
|---|---|---|---|
| **Client:** | King County Environmental Lab | **Service Request:** | K0902663 |
| **Project No.:** | 421973 | **Date Collected:** | 03/25/09 |
| **Project Name:** | King County Intercalibration Stu | **Date Received:** | 03/27/09 |
| **Matrix:** | WATER | **Units:** | ug/L |
| | | **Basis:** | N/A |

**Sample Name:** L47479-24 **Lab Code:** K0902663-024 DISS

| Analyte | Analysis Method | MRL | MDL | Dil. Factor | Date Extracted | Date Analyzed | Result | C | Q |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | 245.1 | 0.20 | 0.05 | 1.0 | 03/30/09 | 03/31/09 | 0.05 | U | |

**% Solids:** 0.0

Comments:

# Metals

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## INORGANIC ANALYSIS DATA PACKAGE

| | | | |
|---|---|---|---|
| **Client:** | King County Environmental Lab | **Service Request:** | K0902663 |
| **Project No.:** | 421973 | **Date Collected:** | 03/25/09 |
| **Project Name:** | King County Intercalibration Stu | **Date Received:** | 03/27/09 |
| **Matrix:** | WATER | **Units:** | ug/L |
| | | **Basis:** | N/A |

**Sample Name:** L47479-25 **Lab Code:** K0902663-025 DISS

| Analyte | Analysis Method | MRL | MDL | Dil. Factor | Date Extracted | Date Analyzed | Result | C | Q |
|---|---|---|---|---|---|---|---|---|---|
| Copper | 200.8 | 0.10 | 0.02 | 1.0 | 04/01/09 | 04/02/09 | 12.1 | | |
| Lead | 200.8 | 0.020 | 0.006 | 1.0 | 04/01/09 | 04/02/09 | 2.740 | | |
| Zinc | 200.8 | 0.50 | 0.08 | 1.0 | 04/01/09 | 04/02/09 | 62.2 | | |

**% Solids:** 0.0

Comments:

[redacted]

# Metals

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## INORGANIC ANALYSIS DATA PACKAGE

| | | | |
|---|---|---|---|
| **Client:** | King County Environmental Lab | **Service Request:** | K0902663 |
| **Project No.:** | 421973 | **Date Collected:** | 03/25/09 |
| **Project Name:** | King County Intercalibration Stu | **Date Received:** | 03/27/09 |
| **Matrix:** | WATER | **Units:** | ug/L |
| | | **Basis:** | N/A |

**Sample Name:** L47479-26 **Lab Code:** K0902663-026 DISS

| Analyte | Analysis Method | MRL | MDL | Dil. Factor | Date Extracted | Date Analyzed | Result | C | Q |
|---|---|---|---|---|---|---|---|---|---|
| Copper | 200.8 | 0.10 | 0.02 | 1.0 | 04/01/09 | 04/02/09 | 12.1 | | |
| Lead | 200.8 | 0.020 | 0.006 | 1.0 | 04/01/09 | 04/02/09 | 2.730 | | |
| Zinc | 200.8 | 0.50 | 0.08 | 1.0 | 04/01/09 | 04/02/09 | 60.9 | | |

**% Solids:** 0.0

Comments:

# Metals

- 1 -

## INORGANIC ANALYSIS DATA PACKAGE

| | | | |
|---|---|---|---|
| **Client:** | King County Environmental Lab | **Service Request:** | K0902663 |
| **Project No.:** | 421973 | **Date Collected:** | 03/25/09 |
| **Project Name:** | King County Intercalibration Stu | **Date Received:** | 03/27/09 |
| **Matrix:** | WATER | **Units:** | ug/L |
| | | **Basis:** | N/A |

**Sample Name:** L47479-27 **Lab Code:** K0902663-027 DISS

| Analyte | Analysis Method | MRL | MDL | Dil. Factor | Date Extracted | Date Analyzed | Result | C | Q |
|---|---|---|---|---|---|---|---|---|---|
| Copper | 200.8 | 0.10 | 0.02 | 1.0 | 04/01/09 | 04/02/09 | 12.2 | | |
| Lead | 200.8 | 0.020 | 0.006 | 1.0 | 04/01/09 | 04/02/09 | 2.740 | | |
| Zinc | 200.8 | 0.50 | 0.08 | 1.0 | 04/01/09 | 04/02/09 | 61.9 | | |

**% Solids:** 0.0

Comments:

[redacted]

# Metals

- 1 -

## INORGANIC ANALYSIS DATA PACKAGE

| | | | |
|---|---|---|---|
| **Client:** | King County Environmental Lab | **Service Request:** | K0902663 |
| **Project No.:** | 421973 | **Date Collected:** | 03/25/09 |
| **Project Name:** | King County Intercalibration Stu | **Date Received:** | 03/27/09 |
| **Matrix:** | WATER | **Units:** | ug/L |
| | | **Basis:** | N/A |

**Sample Name:** L47479-28 **Lab Code:** K0902663-028 DISS

| Analyte | Analysis Method | MRL | MDL | Dil. Factor | Date Extracted | Date Analyzed | Result | C | Q |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | 245.1 | 0.20 | 0.05 | 1.0 | 03/30/09 | 03/31/09 | 0.05 | U | |

**% Solids:** 0.0

Comments:

[redacted]

# Metals

- 1 -

## INORGANIC ANALYSIS DATA PACKAGE

| | | | |
|---|---|---|---|
| **Client:** | King County Environmental Lab | **Service Request:** | K0902663 |
| **Project No.:** | 421973 | **Date Collected:** | 03/25/09 |
| **Project Name:** | King County Intercalibration Stu | **Date Received:** | 03/27/09 |
| **Matrix:** | WATER | **Units:** | ug/L |
| | | **Basis:** | N/A |

**Sample Name:** L47479-29 **Lab Code:** K0902663-029 DISS

| Analyte | Analysis Method | MRL | MDL | Dil. Factor | Date Extracted | Date Analyzed | Result | C | Q |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | 245.1 | 0.20 | 0.05 | 1.0 | 03/30/09 | 03/31/09 | 0.05 | U | |

**% Solids:** 0.0

Comments:

# Metals

- 1 -

## INORGANIC ANALYSIS DATA PACKAGE

| | | | |
|---|---|---|---|
| **Client:** | King County Environmental Lab | **Service Request:** | K0902663 |
| **Project No.:** | 421973 | **Date Collected:** | 03/25/09 |
| **Project Name:** | King County Intercalibration Stu | **Date Received:** | 03/27/09 |
| **Matrix:** | WATER | **Units:** | ug/L |
| | | **Basis:** | N/A |

**Sample Name:** L47479-30 **Lab Code:** K0902663-030 DISS

| Analyte | Analysis Method | MRL | MDL | Dil. Factor | Date Extracted | Date Analyzed | Result | C | Q |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | 245.1 | 0.20 | 0.05 | 1.0 | 03/30/09 | 03/31/09 | 0.05 | U | |

**% Solids:** 0.0

Comments:

[redacted]

# Metals

- 1 -

## INORGANIC ANALYSIS DATA PACKAGE

| | | | |
|---|---|---|---|
| **Client:** | King County Environmental Lab | **Service Request:** | K0902663 |
| **Project No.:** | 421973 | **Date Collected:** | 03/25/09 |
| **Project Name:** | King County Intercalibration Stu | **Date Received:** | 03/27/09 |
| **Matrix:** | WATER | **Units:** | ug/L |
| | | **Basis:** | N/A |

**Sample Name:** L47479-31 **Lab Code:** K0902663-031 DISS

| Analyte | Analysis Method | MRL | MDL | Dil. Factor | Date Extracted | Date Analyzed | Result | C | Q |
|---|---|---|---|---|---|---|---|---|---|
| Copper | 200.8 | 0.10 | 0.02 | 1.0 | 04/01/09 | 04/02/09 | 1.60 | | |
| Lead | 200.8 | 0.020 | 0.006 | 1.0 | 04/01/09 | 04/02/09 | 0.180 | | |
| Zinc | 200.8 | 0.50 | 0.08 | 1.0 | 04/01/09 | 04/02/09 | 4.23 | | |

**% Solids:** 0.0

Comments:

# Metals

- 1 -

## INORGANIC ANALYSIS DATA PACKAGE

| | | | |
|---|---|---|---|
| **Client:** | King County Environmental Lab | **Service Request:** | K0902663 |
| **Project No.:** | 421973 | **Date Collected:** | 03/25/09 |
| **Project Name:** | King County Intercalibration Stu | **Date Received:** | 03/27/09 |
| **Matrix:** | WATER | **Units:** | ug/L |
| | | **Basis:** | N/A |

**Sample Name:** L47479-32 **Lab Code:** K0902663-032 DISS

| Analyte | Analysis Method | MRL | MDL | Dil. Factor | Date Extracted | Date Analyzed | Result | C | Q |
|---|---|---|---|---|---|---|---|---|---|
| Copper | 200.8 | 0.10 | 0.02 | 1.0 | 04/01/09 | 04/02/09 | 1.64 | | |
| Lead | 200.8 | 0.020 | 0.006 | 1.0 | 04/01/09 | 04/02/09 | 0.188 | | |
| Zinc | 200.8 | 0.50 | 0.08 | 1.0 | 04/01/09 | 04/02/09 | 4.23 | | |

**% Solids:** 0.0

Comments:

[redacted]

# Metals

- 1 -

## INORGANIC ANALYSIS DATA PACKAGE

| | | | |
|---|---|---|---|
| **Client:** | King County Environmental Lab | **Service Request:** | K0902663 |
| **Project No.:** | 421973 | **Date Collected:** | 03/25/09 |
| **Project Name:** | King County Intercalibration Stu | **Date Received:** | 03/27/09 |
| **Matrix:** | WATER | **Units:** | ug/L |
| | | **Basis:** | N/A |

**Sample Name:** L47479-33 **Lab Code:** K0902663-033 DISS

| Analyte | Analysis Method | MRL | MDL | Dil. Factor | Date Extracted | Date Analyzed | Result | C | Q |
|---|---|---|---|---|---|---|---|---|---|
| Copper | 200.8 | 0.10 | 0.02 | 1.0 | 04/01/09 | 04/02/09 | 1.65 | | |
| Lead | 200.8 | 0.020 | 0.006 | 1.0 | 04/01/09 | 04/02/09 | 0.185 | | |
| Zinc | 200.8 | 0.50 | 0.08 | 1.0 | 04/01/09 | 04/02/09 | 4.03 | | |

**% Solids:** 0.0

Comments:

# Metals

- 1 -

## INORGANIC ANALYSIS DATA PACKAGE

| | | | |
|---|---|---|---|
| **Client:** | King County Environmental Lab | **Service Request:** | K0902663 |
| **Project No.:** | 421973 | **Date Collected:** | 03/25/09 |
| **Project Name:** | King County Intercalibration Stu | **Date Received:** | 03/27/09 |
| **Matrix:** | WATER | **Units:** | ug/L |
| | | **Basis:** | N/A |

**Sample Name:** L47479-34 **Lab Code:** K0902663-034 DISS

| Analyte | Analysis Method | MRL | MDL | Dil. Factor | Date Extracted | Date Analyzed | Result | C | Q |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | 245.1 | 0.20 | 0.05 | 1.0 | 03/30/09 | 03/31/09 | 0.05 | U | |

**% Solids:** 0.0

Comments:

[redacted]

# Metals

- 1 -

## INORGANIC ANALYSIS DATA PACKAGE

| | | | |
|---|---|---|---|
| **Client:** | King County Environmental Lab | **Service Request:** | K0902663 |
| **Project No.:** | 421973 | **Date Collected:** | 03/25/09 |
| **Project Name:** | King County Intercalibration Stu | **Date Received:** | 03/27/09 |
| **Matrix:** | WATER | **Units:** | ug/L |
| | | **Basis:** | N/A |

**Sample Name:** L47479-35 **Lab Code:** K0902663-035 DISS

| Analyte | Analysis Method | MRL | MDL | Dil. Factor | Date Extracted | Date Analyzed | Result | C | Q |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | 245.1 | 0.20 | 0.05 | 1.0 | 03/30/09 | 03/31/09 | 0.05 | U | |

**% Solids:** 0.0

Comments:

# Metals

- 1 -

## INORGANIC ANALYSIS DATA PACKAGE

| | | | |
|---|---|---|---|
| **Client:** | King County Environmental Lab | **Service Request:** | K0902663 |
| **Project No.:** | 421973 | **Date Collected:** | 03/25/09 |
| **Project Name:** | King County Intercalibration Stu | **Date Received:** | 03/27/09 |
| **Matrix:** | WATER | **Units:** | ug/L |
| | | **Basis:** | N/A |

**Sample Name:** L47479-36 **Lab Code:** K0902663-036 DISS

| Analyte | Analysis Method | MRL | MDL | Dil. Factor | Date Extracted | Date Analyzed | Result | C | Q |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | 245.1 | 0.20 | 0.05 | 1.0 | 03/30/09 | 03/31/09 | 0.05 | U | |

**% Solids:** 0.0

Comments:

[redacted]

# Metals



## INORGANIC ANALYSIS DATA PACKAGE

| | | | |
|---|---|---|---|
| **Client:** | King County Environmental Lab | **Service Request:** | K0902663 |
| **Project No.:** | 421973 | **Date Collected:** | |
| **Project Name:** | King County Intercalibration Stu | **Date Received:** | |
| **Matrix:** | WATER | **Units:** | ug/L |
| | | **Basis:** | N/A |

**Sample Name:** Method Blank **Lab Code:** K0902663-MB

| Analyte | Analysis Method | MRL | MDL | Dil. Factor | Date Extracted | Date Analyzed | Result | C | Q |
|---|---|---|---|---|---|---|---|---|---|
| Copper | 200.8 | 0.10 | 0.02 | 1.0 | 04/01/09 | 04/02/09 | 0.02 | U | |
| Lead | 200.8 | 0.020 | 0.006 | 1.0 | 04/01/09 | 04/02/09 | 0.006 | U | |
| Mercury | 245.1 | 0.20 | 0.05 | 1.0 | 03/30/09 | 03/31/09 | 0.05 | U | |
| Zinc | 200.8 | 0.50 | 0.08 | 1.0 | 04/01/09 | 04/02/09 | 0.21 | B | |

**% Solids:** 0.0

Comments:

# Metals

- 2a -

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

**Client:** King County Environmental Lab **Service Request:** K0902663

**Project No.:** 421973

**Project Name:** King County Intercalibration Stu

**ICV Source:** Inorganic Ventures **CCV Source:** CAS MIXED

**Concentration Units:** ug/L

| Analyte | Initial Calibration | | | Continuing Calibration | | | | | Method |
|---|---|---|---|---|---|---|---|---|---|
| | True | Found | %R(1) | True | Found | %R(1) | Found | %R(1) | |
| Copper | 12.5 | 12.5 | 100 | 25.0 | 25.2 | 101 | 25.1 | 100 | 200.8 |
| Lead | 25.0 | 25.0 | 100 | 25.0 | 25.1 | 100 | 24.9 | 100 | 200.8 |
| Mercury | 5.00 | 4.99 | 100 | 5.00 | 4.93 | 99 | 5.23 | 105 | 245.1 |
| Zinc | 25.0 | 25.5 | 102 | 25.0 | 25.1 | 100 | 25.3 | 101 | 200.8 |

[redacted]

# Metals

- 2a -

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

**Client:** King County Environmental Lab **Service Request:** K0902663

**Project No.:** 421973

**Project Name:** King County Intercalibration Stu

**ICV Source:** Inorganic Ventures **CCV Source:** CAS MIXED

**Concentration Units:** ug/L

| Analyte | Initial Calibration | | | Continuing Calibration | | | | | Method |
|---|---|---|---|---|---|---|---|---|---|
| | True | Found | %R(1) | True | Found | %R(1) | Found | %R(1) | |
| Copper | | | | 25.0 | 25.0 | 100 | 25.0 | 100 | 200.8 |
| Lead | | | | 25.0 | 24.9 | 100 | 24.9 | 100 | 200.8 |
| Mercury | | | | 5.00 | 4.95 | 99 | 5.08 | 102 | 245.1 |
| Zinc | | | | 25.0 | 25.0 | 100 | 25.0 | 100 | 200.8 |

[redacted]

# Metals

## - 2a -

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

**Client:** King County Environmental Lab **Service Request:** K0902663

**Project No.:** 421973

**Project Name:** King County Intercalibration Stu

**ICV Source:** Inorganic Ventures **CCV Source:** CAS MIXED

**Concentration Units:** ug/L

| Analyte | Initial Calibration | | | Continuing Calibration | | | | | Method |
|---|---|---|---|---|---|---|---|---|---|
| | True | Found | %R(1) | True | Found | %R(1) | Found | %R(1) | |
| Mercury | | | | 5.00 | 5.01 | 100 | 5.19 | 104 | 245.1 |

# Metals
## - 2b -
## CRDL STANDARD FOR AA AND ICP

**Client:** King County Environmental Lab **Service Request:** K0902663

**Project No.:** 421973

**Project Name:** King County Intercalibration Stu

Concentration Units: ug/L

| Analyte | CRDL Standard for AA | | | CRDL Standard for ICP | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | Initial | | | Final | |
| | True | Found | %R | True | Found | %R | Found | %R |
| Copper | | | | 0.10 | 0.10 | 100 | | |
| Lead | | | | 0.020 | 0.017 | 85 | | |
| Mercury | 0.20 | 0.19 | 95 | | | | | |
| Zinc | | | | 0.5 | 0.5 | 100 | | |

[redacted]

# Metals

- 3 -

## BLANKS

**Client:** King County Environmental Lab **Service Request:** K0902663

**Project No.:** 421973

**Project Name:** King County Intercalibration Stu

**Concentration Units: ug/L**

| Analyte | Initial Calib. Blank | C | Continuing Calibration Blank 1 | C | 2 | C | 3 | C | Method |
|---|---|---|---|---|---|---|---|---|---|
| Copper | 0.02 | U | 0.02 | U | 0.02 | U | 0.02 | U | 200.8 |
| Lead | 0.018 | B | 0.011 | B | 0.013 | B | 0.015 | B | 200.8 |
| Mercury | 0.05 | U | 0.05 | B | 0.05 | U | 0.05 | U | 245.1 |
| Zinc | 0.1 | U | 0.1 | U | 0.1 | U | 0.1 | U | 200.8 |

[redacted]

# Metals

- 3 -

## BLANKS

**Client:** King County Environmental Lab **Service Request:** K0902663

**Project No.:** 421973

**Project Name:** King County Intercalibration Stu

**Concentration Units: ug/L**

| Analyte | Initial Calib. Blank | C | Continuing Calibration Blank 1 | C | 2 | C | 3 | C | Method |
|---|---|---|---|---|---|---|---|---|---|
| Copper | | | 0.02 | U | | | | | 200.8 |
| Lead | | | 0.014 | B | | | | | 200.8 |
| Mercury | | | 0.05 | U | 0.05 | U | 0.05 | U | 245.1 |
| Zinc | | | 0.1 | U | | | | | 200.8 |

[redacted]

# Metals

- 5A -

## SPIKE SAMPLE RECOVERY

| | | | |
|---|---|---|---|
| Client: | King County Environmental Lab | Service Request: | K0902663 |
| Project No.: | 421973 | Units: | UG/L |
| Project Name: | King County Intercalibration Stu | Basis: | N/A |
| Matrix: | WATER | % Solids: | 0.0 |

Sample Name: L47479-4S  Lab Code: K0902663-004S

| Analyte | Control Limit %R | Spike Result | C | Sample Result | C | Spike Added | %R | Q | Method |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | 70 - 130 | 1.01 | | 0.05 | U | 1.00 | 101.0 | | 245.1 |

An empty field in the Control Limit column indicates the control limit is not applicable

[redacted]

# Metals

- 5A -

## SPIKE SAMPLE RECOVERY

| | | | |
|---|---|---|---|
| Client: | King County Environmental Lab | Service Request: | K0902663 |
| Project No.: | 421973 | Units: | UG/L |
| Project Name: | King County Intercalibration Stu | Basis: | N/A |
| Matrix: | WATER | % Solids: | 0.0 |

Sample Name: L47479-13S  Lab Code: K0902663-013S

| Analyte | Control Limit %R | Spike Result | C | Sample Result | C | Spike Added | %R | Q | Method |
|---|---|---|---|---|---|---|---|---|---|
| Copper | 70 - 130 | 21.0 | | 2.60 | | 20.00 | 92.0 | | 200.8 |
| Lead | 70 - 130 | 20.3 | | 1.830 | | 20.00 | 92.4 | | 200.8 |
| Zinc | 70 - 130 | 27.4 | | 9.70 | | 20.00 | 88.5 | | 200.8 |

An empty field in the Control Limit column indicates the control limit is not applicable

[redacted]

# Metals

- 5A -

## SPIKE SAMPLE RECOVERY

| | | | |
|---|---|---|---|
| Client: | King County Environmental Lab | Service Request: | K0902663 |
| Project No.: | 421973 | Units: | UG/L |
| Project Name: | King County Intercalibration Stu | Basis: | N/A |
| Matrix: | WATER | % Solids: | 0.0 |

Sample Name: L47479-16S  Lab Code: K0902663-016S

| Analyte | Control Limit %R | Spike Result | C | Sample Result | C | Spike Added | %R | Q | Method |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | 70 - 130 | 0.99 | | 0.05 | U | 1.00 | 99.0 | | 245.1 |

An empty field in the Control Limit column indicates the control limit is not applicable

[redacted]

# Metals

- 5A -

## SPIKE SAMPLE RECOVERY

| | | | |
|---|---|---|---|
| Client: | King County Environmental Lab | Service Request: | K0902663 |
| Project No.: | 421973 | Units: | UG/L |
| Project Name: | King County Intercalibration Stu | Basis: | N/A |
| Matrix: | WATER | % Solids: | 0.0 |

Sample Name: L47479-25S  Lab Code: K0902663-025S DISS

| Analyte | Control Limit %R | Spike Result | C | Sample Result | C | Spike Added | %R | Q | Method |
|---|---|---|---|---|---|---|---|---|---|
| Copper | 70 - 130 | 31.2 | | 12.1 | | 20.00 | 95.5 | | 200.8 |
| Lead | 70 - 130 | 21.3 | | 2.740 | | 20.00 | 92.8 | | 200.8 |
| Zinc | 70 - 130 | 79.0 | | 62.2 | | 20.00 | 84.0 | | 200.8 |

An empty field in the Control Limit column indicates the control limit is not applicable

# Metals

- 5B -

## POST SPIKE SAMPLE RECOVERY

Client: King County Environmental Lab  Service Request: K0902663

Project No.: 421973  Units: UG/L

Project Name: King County Intercalibration Stu  Basis: N/A

Matrix: WATER

Sample Name: L47479-4A  Lab Code: K0902663-004A

| Analyte | Control Limit %R | Spike Result | C | Sample Result | C | Spike Added | %R | Q | Method |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | 85 - 115 | 1.00 | | 0.05 | | 1.0 | 100 | | 245.1 |

# Metals

- 6 -

## DUPLICATES

| | | | |
|---|---|---|---|
| Client: | King County Environmental Lab | Service Request: | K0902663 |
| Project No.: | 421973 | Units: | UG/L |
| Project Name: | King County Intercalibration Stu | Basis: | N/A |
| Matrix: | WATER | % Solids: | 0.0 |

Sample Name: L47479-1D  Lab Code: K0902663-001D

| Analyte | Control Limit | Sample (S) | C | Duplicate (D) | C | RPD | Q | Method |
|---|---|---|---|---|---|---|---|---|
| Copper | 20 | 8.22 | | 8.32 | | 1.2 | | 200.8 |
| Lead | 20 | 4.220 | | 4.290 | | 1.6 | | 200.8 |
| Zinc | 20 | 36.1 | | 36.5 | | 1.1 | | 200.8 |

An empty field in the Control Limit column indicates the control limit is not applicable.

# Metals

- 6 -

## DUPLICATES

| | | | |
|---|---|---|---|
| Client: | King County Environmental Lab | Service Request: | K0902663 |
| Project No.: | 421973 | Units: | UG/L |
| Project Name: | King County Intercalibration Stu | Basis: | N/A |
| Matrix: | WATER | % Solids: | 0.0 |

Sample Name: L47479-4D  Lab Code: K0902663-004D

| Analyte | Control Limit | Sample (S) | C | Duplicate (D) | C | RPD | Q | Method |
|---|---|---|---|---|---|---|---|---|
| Mercury | | 0.05 | U | 0.05 | U | | | 245.1 |

An empty field in the Control Limit column indicates the control limit is not applicable.

# Metals

- 6 -

## DUPLICATES

| | | | |
|---|---|---|---|
| Client: | King County Environmental Lab | Service Request: | K0902663 |
| Project No.: | 421973 | Units: | UG/L |
| Project Name: | King County Intercalibration Stu | Basis: | N/A |
| Matrix: | WATER | % Solids: | 0.0 |

Sample Name: L47479-16D  Lab Code: K0902663-016D

| Analyte | Control Limit | Sample (S) | C | Duplicate (D) | C | RPD | Q | Method |
|---|---|---|---|---|---|---|---|---|
| Mercury | | 0.05 | U | 0.05 | U | | | 245.1 |

An empty field in the Control Limit column indicates the control limit is not applicable.

# Metals

- 6 -

## DUPLICATES

| | | | |
|---|---|---|---|
| Client: | King County Environmental Lab | Service Request: | K0902663 |
| Project No.: | 421973 | Units: | UG/L |
| Project Name: | King County Intercalibration Stu | Basis: | N/A |
| Matrix: | WATER | % Solids: | 0.0 |

Sample Name: L47479-19D  Lab Code: K0902663-019D DISS

| Analyte | Control Limit | Sample (S) | C | Duplicate (D) | C | RPD | Q | Method |
|---|---|---|---|---|---|---|---|---|
| Copper | 20 | 3.57 | | 3.55 | | 0.6 | | 200.8 |
| Lead | 20 | 0.452 | | 0.446 | | 1.3 | | 200.8 |
| Zinc | 20 | 14.0 | | 13.7 | | 2.2 | | 200.8 |

An empty field in the Control Limit column indicates the control limit is not applicable.

[redacted]

# Metals



## LABORATORY CONTROL SAMPLE

**Client:** King County Environmental Lab **Service Request:** K0902663

**Project No.:** 421973

**Project Name:** King County Intercalibration Stu

**Aqueous LCS Source:** CAS MIXED **Solid LCS Source:**

| Analyte | Aqueous: ug/L | | | Solid: mg/kg | | | | |
|---|---|---|---|---|---|---|---|---|
| | True | Found | %R | True | Found | C | Limits | %R |
| Copper | 20 | 19.4 | 97.0 | | | | | |
| Lead | 20 | 19.2 | 96.0 | | | | | |
| Mercury | 5 | 4.93 | 98.6 | | | | | |
| Zinc | 20 | 19.7 | 98.5 | | | | | |

[redacted]

# Metals

- 10 -

## DETECTION LIMITS

**Client:** King County Environmental Lab **Service Request:** K0902663

**Project No.:** 421973

**Project Name:** King County Intercalibration Stu

ICP/ICP-MS ID #: K-ICP-MS-02

GFAA ID #: AA ID #:

| Analyte | Isotope | Back-ground | MRL ug/L | MDL ug/L | M |
|---|---|---|---|---|---|
| Copper | 65 | | 0.1 | 0.02 | MS |
| Lead | 208 | | 0.02 | 0.006 | MS |
| Zinc | 66 | | 0.5 | 0.08 | MS |

Comments:

[redacted]

# Metals

- 10 -

## DETECTION LIMITS

Client: King County Environmental Lab  Service Request: K0902663

Project No.: 421973

Project Name: King County Intercalibration Stu

ICP/ICP-MS ID #:

GFAA ID #:  AA ID #: K-CVAA-01

| Analyte | Wave-length (nm) | Back-ground | MRL ug/L | MDL ug/L | M |
|---|---|---|---|---|---|
| Mercury | 253.70 | | 0.2 | 0.05 | CV |

Comments:

[redacted]

# Metals
## -12-
## ICP LINEAR RANGES (QUARTERLY)

Client: King County Environmental Lab  Service Request: K0902663

Project No.: 421973

Project Name: King County Intercalibration Stu

ICP ID Number: K-ICP-MS-02

| Analyte | Integ. Time (Sec.) | Concentration (ug/L) | Method |
|---|---|---|---|
| Copper | 15.000 | 900 | 200.8 |
| Lead | 15.000 | 900 | 200.8 |
| Zinc | 15.000 | 900 | 200.8 |

Comments:

[redacted]

# Metals
-13-
## PREPARATION LOG

**Client:** King County Environmental Lab **Service Request:** K0902663

**Project No.:** 421973

**Project Name:** King County Intercalibration Stu

**Method:** CV

| Sample ID | Preparation Date | Initial Volume | Final Volume (mL) |
|---|---|---|---|
| K0902663-004 | 03/30/09 | 50.0 | 50.0 |
| K0902663-004D | 03/30/09 | 50.0 | 50.0 |
| K0902663-004S | 03/30/09 | 50.0 | 50.0 |
| K0902663-005 | 03/30/09 | 50.0 | 50.0 |
| K0902663-006 | 03/30/09 | 50.0 | 50.0 |
| K0902663-010 | 03/30/09 | 50.0 | 50.0 |
| K0902663-011 | 03/30/09 | 50.0 | 50.0 |
| K0902663-012 | 03/30/09 | 50.0 | 50.0 |
| K0902663-016 | 03/30/09 | 50.0 | 50.0 |
| K0902663-016D | 03/30/09 | 50.0 | 50.0 |
| K0902663-016S | 03/30/09 | 50.0 | 50.0 |
| K0902663-017 | 03/30/09 | 50.0 | 50.0 |
| K0902663-018 | 03/30/09 | 50.0 | 50.0 |
| K0902663-022 DISS | 03/30/09 | 50.0 | 50.0 |
| K0902663-023 DISS | 03/30/09 | 50.0 | 50.0 |
| K0902663-024 DISS | 03/30/09 | 50.0 | 50.0 |
| K0902663-028 DISS | 03/30/09 | 50.0 | 50.0 |
| K0902663-029 DISS | 03/30/09 | 50.0 | 50.0 |
| K0902663-030 DISS | 03/30/09 | 50.0 | 50.0 |
| K0902663-034 DISS | 03/30/09 | 50.0 | 50.0 |
| K0902663-035 DISS | 03/30/09 | 50.0 | 50.0 |
| K0902663-036 DISS | 03/30/09 | 50.0 | 50.0 |
| K0902663-MB | 03/30/09 | 100.0 | 100.0 |
| LCSW | 03/30/09 | 100.0 | 100.0 |

[redacted]

# Metals
-13-
## PREPARATION LOG

**Client:** King County Environmental Lab **Service Request:** K0902663

**Project No.:** 421973

**Project Name:** King County Intercalibration Stu

**Method:** MS

| Sample ID | Preparation Date | Initial Volume | Final Volume (mL) |
|---|---|---|---|
| K0902663-001 | 04/01/09 | 50.0 | 50.0 |
| K0902663-001D | 04/01/09 | 50.0 | 50.0 |
| K0902663-002 | 04/01/09 | 50.0 | 50.0 |
| K0902663-003 | 04/01/09 | 50.0 | 50.0 |
| K0902663-007 | 04/01/09 | 50.0 | 50.0 |
| K0902663-008 | 04/01/09 | 50.0 | 50.0 |
| K0902663-009 | 04/01/09 | 50.0 | 50.0 |
| K0902663-013 | 04/01/09 | 50.0 | 50.0 |
| K0902663-013S | 04/01/09 | 50.0 | 50.0 |
| K0902663-014 | 04/01/09 | 50.0 | 50.0 |
| K0902663-015 | 04/01/09 | 50.0 | 50.0 |
| K0902663-019 DISS | 04/01/09 | 50.0 | 50.0 |
| K0902663-019D DISS | 04/01/09 | 50.0 | 50.0 |
| K0902663-020 DISS | 04/01/09 | 50.0 | 50.0 |
| K0902663-021 DISS | 04/01/09 | 50.0 | 50.0 |
| K0902663-025 DISS | 04/01/09 | 50.0 | 50.0 |
| K0902663-025S DISS | 04/01/09 | 50.0 | 50.0 |
| K0902663-026 DISS | 04/01/09 | 50.0 | 50.0 |
| K0902663-027 DISS | 04/01/09 | 50.0 | 50.0 |
| K0902663-031 DISS | 04/01/09 | 50.0 | 50.0 |
| K0902663-032 DISS | 04/01/09 | 50.0 | 50.0 |
| K0902663-033 DISS | 04/01/09 | 50.0 | 50.0 |
| K0902663-MB | 04/01/09 | 50.0 | 50.0 |
| LCSW | 04/01/09 | 50.0 | 50.0 |

[redacted]

# Metals
- 14 -
## ANALYSIS RUN LOG

**Client:** King County Environmental Lab **Service Request:** K0902663

**Project No.:** 421973

**Project Name:** King County Intercalibration Stu

**Instrument ID Number:** K-ICP-MS-02 **Method:** MS

**Start Date:** 04/02/09 **End Date:** 04/02/09

| Sample No. | D/F | Time | % R | Analytes | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | AL | SB | AS | BA | BE | CD | CA | CR | CO | CU | FE | PB | MG | MN | HG | NI | K | SE | AG | NA | TL | V | ZN | CN |
| Cal. Blk | 1 | 12:56 | | | | | | | | | | | X | | X | | | | | | | | | | | X | |
| Cal. Stn | 1 | 12:58 | | | | | | | | | | | X | | X | | | | | | | | | | | X | |
| ICV1 | 1 | 13:00 | | | | | | | | | | | X | | X | | | | | | | | | | | X | |
| CCV1 | 1 | 13:03 | | | | | | | | | | | X | | X | | | | | | | | | | | X | |
| ICB1 | 1 | 13:05 | | | | | | | | | | | X | | X | | | | | | | | | | | X | |
| CCB1 | 1 | 13:07 | | | | | | | | | | | X | | X | | | | | | | | | | | X | |
| CRA1 | 1 | 13:09 | | | | | | | | | | | X | | X | | | | | | | | | | | X | |
| K0902663-MB | 1 | 13:12 | | | | | | | | | | | X | | X | | | | | | | | | | | X | |
| LCSW | 1 | 13:14 | | | | | | | | | | | X | | X | | | | | | | | | | | X | |
| K0902663-001 | 1 | 13:16 | | | | | | | | | | | X | | X | | | | | | | | | | | X | |
| K0902663-001D | 1 | 13:19 | | | | | | | | | | | X | | X | | | | | | | | | | | X | |
| K0902663-002 | 1 | 13:21 | | | | | | | | | | | X | | X | | | | | | | | | | | X | |
| K0902663-003 | 1 | 13:23 | | | | | | | | | | | X | | X | | | | | | | | | | | X | |
| K0902663-007 | 1 | 13:25 | | | | | | | | | | | X | | X | | | | | | | | | | | X | |
| K0902663-008 | 1 | 13:28 | | | | | | | | | | | X | | X | | | | | | | | | | | X | |
| K0902663-009 | 1 | 13:30 | | | | | | | | | | | X | | X | | | | | | | | | | | X | |
| CCV2 | 1 | 13:32 | | | | | | | | | | | X | | X | | | | | | | | | | | X | |
| CCB2 | 1 | 13:35 | | | | | | | | | | | X | | X | | | | | | | | | | | X | |
| K0902663-013 | 1 | 13:37 | | | | | | | | | | | X | | X | | | | | | | | | | | X | |
| K0902663-013S | 1 | 13:39 | | | | | | | | | | | X | | X | | | | | | | | | | | X | |
| K0902663-014 | 1 | 13:42 | | | | | | | | | | | X | | X | | | | | | | | | | | X | |
| K0902663-015 | 1 | 13:44 | | | | | | | | | | | X | | X | | | | | | | | | | | X | |
| K0902663-019 DISS | 1 | 13:46 | | | | | | | | | | | X | | X | | | | | | | | | | | X | |
| K0902663-019D DISS | 1 | 13:48 | | | | | | | | | | | X | | X | | | | | | | | | | | X | |
| K0902663-020 DISS | 1 | 13:51 | | | | | | | | | | | X | | X | | | | | | | | | | | X | |
| K0902663-021 DISS | 1 | 13:53 | | | | | | | | | | | X | | X | | | | | | | | | | | X | |
| K0902663-025 DISS | 1 | 13:55 | | | | | | | | | | | X | | X | | | | | | | | | | | X | |
| K0902663-025S DISS | 1 | 13:58 | | | | | | | | | | | X | | X | | | | | | | | | | | X | |
| CCV3 | 1 | 14:00 | | | | | | | | | | | X | | X | | | | | | | | | | | X | |
| CCB3 | 1 | 14:02 | | | | | | | | | | | X | | X | | | | | | | | | | | X | |
| K0902663-026 DISS | 1 | 14:04 | | | | | | | | | | | X | | X | | | | | | | | | | | X | |
| K0902663-027 DISS | 1 | 14:07 | | | | | | | | | | | X | | X | | | | | | | | | | | X | |

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

[redacted]

# Metals
- 14 -
## ANALYSIS RUN LOG

**Client:** King County Environmental Lab **Service Request:** K0902663

**Project No.:** 421973

**Project Name:** King County Intercalibration Stu

**Instrument ID Number:** K-ICP-MS-02 **Method:** MS

**Start Date:** 04/02/09 **End Date:** 04/02/09

| Sample No. | D/F | Time | % R | Analytes | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | AL | SB | AS | BA | BE | CD | CA | CR | CO | CU | FE | PB | MG | MN | HG | NI | K | SE | AG | NA | TL | V | ZN | CN |
| K0902663-031 DISS | 1 | 14:09 | | | | | | | | | | | X | | X | | | | | | | | | | | X | |
| K0902663-032 DISS | 1 | 14:11 | | | | | | | | | | | X | | X | | | | | | | | | | | X | |
| K0902663-033 DISS | 1 | 14:14 | | | | | | | | | | | X | | X | | | | | | | | | | | X | |
| CCV4 | 1 | 14:16 | | | | | | | | | | | X | | X | | | | | | | | | | | X | |
| CCB4 | 1 | 14:18 | | | | | | | | | | | X | | X | | | | | | | | | | | X | |

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

[redacted]

# Metals
- 14 -
## ANALYSIS RUN LOG

**Client:** King County Environmental Lab **Service Request:** K0902663

**Project No.:** 421973

**Project Name:** King County Intercalibration Stu

**Instrument ID Number:** K-CVAA-01 **Method:** CV

**Start Date:** 03/31/09 **End Date:** 03/31/09

| Sample No. | D/F | Time | % R | Analytes | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | AL | SB | AS | BA | BE | CD | CA | CR | CO | CU | FE | PB | MG | MN | HG | NI | K | SE | AG | NA | TL | V | ZN | CN |
| Calibration Zero | 1 | 12:35 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| Standard #1 | 1 | 12:36 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| Standard #2 | 1 | 12:38 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| Standard #3 | 1 | 12:40 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| Standard #4 | 1 | 12:42 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| Standard #5 | 1 | 12:43 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| ICV1 | 1 | 12:45 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| ICB1 | 1 | 12:47 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| CCV1 | 1 | 12:49 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| CCB1 | 1 | 12:50 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| CRA1 | 1 | 12:56 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| ZZZZZZ | 1 | 12:58 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 13:00 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 13:01 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 13:03 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 13:06 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 13:08 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 13:10 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 13:13 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 13:15 | | | | | | | | | | | | | | | | | | | | | | | | | |
| CCV2 | 1 | 14:35 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| CCB2 | 1 | 14:37 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| ZZZZZZ | 1 | 14:38 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 14:40 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 14:42 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 14:44 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 14:46 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 14:47 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 14:49 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 14:51 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 14:53 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 14:55 | | | | | | | | | | | | | | | | | | | | | | | | | |

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

[redacted]

# Metals
- 14 -
## ANALYSIS RUN LOG

**Client:** King County Environmental Lab **Service Request:** K0902663

**Project No.:** 421973

**Project Name:** King County Intercalibration Stu

**Instrument ID Number:** K-CVAA-01 **Method:** CV

**Start Date:** 03/31/09 **End Date:** 03/31/09

| Sample No. | D/F | Time | % R | Analytes | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | AL | SB | AS | BA | BE | CD | CA | CR | CO | CU | FE | PB | MG | MN | HG | NI | K | SE | AG | NA | TL | V | ZN | CN |
| CCV3 | 1 | 14:56 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| CCB3 | 1 | 14:58 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| ZZZZZZ | 1 | 15:00 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 15:02 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1 | 15:15 | | | | | | | | | | | | | | | | | | | | | | | | | |
| K0902663-MB | 1 | 15:16 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| LCSW | 1 | 15:18 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| K0902663-004 | 1 | 15:20 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| K0902663-004A | 1 | 15:22 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| K0902663-004D | 1 | 15:24 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| K0902663-004S | 1 | 15:25 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| K0902663-005 | 1 | 15:27 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| CCV4 | 1 | 15:29 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| CCB4 | 1 | 15:31 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| K0902663-006 | 1 | 15:33 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| K0902663-010 | 1 | 15:34 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| K0902663-011 | 1 | 15:36 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| K0902663-012 | 1 | 15:38 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| K0902663-016 | 1 | 15:40 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| K0902663-016D | 1 | 15:42 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| K0902663-016S | 1 | 15:43 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| K0902663-017 | 1 | 15:45 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| K0902663-018 | 1 | 15:47 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| K0902663-022 DISS | 1 | 15:49 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| CCV5 | 1 | 15:50 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| CCB5 | 1 | 15:52 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| K0902663-023 DISS | 1 | 15:54 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| K0902663-024 DISS | 1 | 15:56 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| K0902663-028 DISS | 1 | 15:58 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| K0902663-029 DISS | 1 | 15:59 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| K0902663-030 DISS | 1 | 16:01 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| K0902663-034 DISS | 1 | 16:03 | | | | | | | | | | | | | | | | X | | | | | | | | | |

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

# Metals
- 14 -
## ANALYSIS RUN LOG

**Client:** King County Environmental Lab **Service Request:** K0902663

**Project No.:** 421973

**Project Name:** King County Intercalibration Stu

**Instrument ID Number:** K-CVAA-01 **Method:** CV

**Start Date:** 03/31/09 **End Date:** 03/31/09

| Sample No. | D/F | Time | % R | Analytes | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | AL | SB | AS | BA | BE | CD | CA | CR | CO | CU | FE | PB | MG | MN | HG | NI | K | SE | AG | NA | TL | V | ZN | CN |
| K0902663-035 DISS | 1 | 16:05 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| K0902663-036 DISS | 1 | 16:07 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| CCV6 | 1 | 16:11 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| CCB6 | 1 | 16:13 | | | | | | | | | | | | | | | | X | | | | | | | | | |

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

[redacted]

Metals Digestion Sheet

Service Request Number(s) : K0902663

Star Lims Run No.: 84885

Method : CLP 3010A 3020A 3005A 3050B (CLP Hot Block) Other- _____

Analysis for : ICP (ICP-MS) GFAA Flame AA Other _____

| Sample | Initial Weight (g) | Dry | Wet | Initial Volume(ml) | Final Volume (ml) | Matrix |
|---|---|---|---|---|---|---|
| BLK | | | X | 50 | 50 | 1% $HNO_3$ |
| LCSW | | | | | | |
| K0902663-1 | | | | | | |
| -1d | | | | | | |
| -2 | | | | | | |
| -3 | | | | | | |
| -7 | | | | | | |
| -8 | | | | | | |
| -9 | | | | | | |
| -13 | | | | | | |
| -13s | | | | | | |
| -14 | | | | | | |
| -15 | | | | | | |
| -19 | | | | | | |
| -19d | | | | | | |
| BSS -19+20 4/1/09 | | | | | | |
| -21 | | | | | | |
| -25 | | | | | | |
| -25s | | | | | | |
| -26 | | | | | | |
| -27 | | | | | | |
| -31 | | | | | | |
| -32 | | | | | | |
| -33 | | | | | | |
| | | | | | | |
| | BJS | 4/1/09 | | | | |

**Time Digestion Started:** 4:00pm **Balance I.D.:** _____ **Date Balance Checked** _____

**Lot # Acids Used: HNO3** MS12-71F **HCl** _____ **$H_2O_2$** _____ **HF** _____

**Hot Block Temp:** 95°C

**LCSS (circle appropriate) ERA CLP Soil Lot # D045540 Other:** _____

**GFAA LCSW =** GFLCSW, MET1-71-S, _____ mls. added

**ICP LCSW =** QCP-CICV-1, MET1-70-P, _____ mls. added

QCP CICV-2, MET1-71-M, _____ mls. added

QCP CICV-3, MET1-71-N, _____ mls. added

SS6, MET1-73-J, _____ mls. Added

**TCLP Spike/LCSE**

TSS1 MET1-74-K _____ mls. added

**SPIKE INFO**

SS1-MET1-74-P, _____ mls added SS4-MET1-71-R _____ mls added SS7-MET1-71-O _____ mls added

SS5-MET1-71-Q, _____ mls added 200.8 1000ppb Stock (MS12-51-A) 1.0 mls added

SS6-MET1-73-J, _____ mls added Ag 1000ppb Stock (MS12-73-H) 1.0 mls added

**Additional spikes:** _____

**Comments:** _____

**Analyst** Brian Shell **Date** 4/1/09

**Reviewer** _____ **Date** 4/1/09

metdig.xls

# CVAA Mercury Data Review Form

Element: Hg

Analysis Lot #: 148337

Cal. STD/CCV Source: HG1-80-N

Service Request Numbers:

K0902479, K0902347, K0902651, K0902528, K0902663

| | Yes | No | NA |
|---|---|---|---|
| 1) Appropriate standardization completed | X | | |
| 2) ICV within 10% of true value | X | | |
| 3) CCVs in control | X | | |
| 4) CCBs and or ICBs below MRL | X | | |
| 5) All reported samples within calibration range | X | | |
| 6) Calculations correct | X | | |

Comments:

Data reviewed against service request(s) to ensure no samples were omitted: MS (initials)

Primary Reviewed By: MAS Date: 3/31/09

Secondary Reviewed By: JDB Date: 4/1/09

[redacted] PRINTOUT WITH:_____

ANALYTICAL WORKSHEET

| Method: (Circle One) 7470A 7471A (245.1) | Service Request # : K0902473, K0902347, K0902651, K0902528, K0902663 |
|---|---|
| Analysis For: Hg | |

DATA

| Pos. | SAMPLE NUMBER | Initial Sample (g) or (mL) | Initial Dilution (mL) | Dilution Factor | Measured (µg/L) | Sample Actual (mg/kg) | Sample Actual (µg/L) |
|---|---|---|---|---|---|---|---|
| 1 | ICV1 | ~ | ~ | ~ | 4.99 | | 100% |
| 2 | ICB1 | ~ | ~ | ~ | -0.02 | | < 0.2 |
| 3 | CCV1 | ~ | ~ | ~ | 4.93 | | 99% |
| 4 | CCB1 | ~ | ~ | ~ | 0.05 | | < 0.2 |
| 5 | CRA1 | ~ | ~ | ~ | 0.19 | | 95% |
| 6 | K0902479-MB | 100 | 100 | ~ | -0.01 | | -0.01 |
| 7 | LCSW K0902479 | 100 | 100 | ~ | 4.98 | | 100% |
| 8 | K0902479-010 | 100 | 100 | ~ | 0.03 | | 0.03 |
| 9 | K0902479-010A | 100 | 100 | ~ | 0.99 | | 96% |
| 10 | K0902347-001 | 25 | 50 | ~ | 0.05 | Cx=0.08ppb | 0.08 |
| 11 | K0902347-001A | MS 3/31/09 ~~50~~ 25 | 50 | ~ | 0.62 | | 62% |
| 12 | K0902347-002 | 50 | 50 | ~ | -0.01 | Cx=-0.04ppb | -0.04 |
| 13 | K0902347-002A | 50 | 50 | ~ | 0.26 | | 26% |
| 14 | K0902347-0003 | 50 | 50 | ~ | -0.04 | | -0.04 |
| 15 | CCV2 | ~ | ~ | ~ | 5.23 | | 105% |
| 16 | CCB2 | ~ | ~ | ~ | -0.01 | | < 0.2 |
| 17 | K0902347-002A | 50 | 50 | ~ | 1.04 | | 104% |
| 18 | K0902347-003 | 50 | 50 | ~ | -0.01 | | -0.01 |
| 19 | K0902347-003A | 50 | 50 | ~ | 1.02 | | 102% |
| 20 | K0902347-004 | 5 | 100 | ~ | 0.00 | Cx=0.00ppb | 0.00 |
| 21 | K0902347-004A | MS 3/31/09 ~~50~~ 5 | 50 | ~ | 0.74 | | 74% |
| 22 | K0902347-005 | 50 | 50 | ~ | -0.01 | | -0.01 |
| 23 | K0902347-005A | 50 | 50 | ~ | 1.03 | | 103% |
| 24 | K0902651-011 | 100 | 100 | ~ | -0.01 | | -0.01 |
| 25 | K0902651-012 | 100 | 100 | ~ | -0.01 | | -0.01 |

**Comments: Reporting Levels:**

**Soil/Tissue Spike Level:**

**Post Spike Level: 1.0 ppb**

| Method | Spike Level | MRL | LCS Limit | MS Limit | RPD |
|---|---|---|---|---|---|
| 7470A Water | 1.0 µg/L | 0.2 µg/L | 84-117% | 78-122% | 20% |
| 245.1 Water | 1.0 µg/L | 0.2 µg/L | 85-115% | 70-131% | 20% |
| 7470A TCLP | 5.0 µg/L | 1.0 µg/L | 85-115% | 75-125% | 20% |
| 7471A Soil LCSS | 1.77 mg/kg | 0.02 mg/kg | 76-121% | 64-127% | 30% |
| 7471A Tissue Tort | 3.37 mg/kg | 0.02 mg/kg | 63-130% | 60-130% | 30% |

| Analyst: | Date: | Page Number: |
|---|---|---|
| Melissa Allcoth | 3/31/09 | 1 |

[HgWaterRunForm] HG1.XLS

[redacted] PRINTOUT WITH:_____

ANALYTICAL WORKSHEET

| Method: (Circle One) 7470A 7471A 245.1 | Service Request # : |
|---|---|
| Analysis For: Hg | |

DATA

| Pos. | SAMPLE NUMBER | Initial Sample (g) or (mL) | Initial Dilution (mL) | Dilution Factor | Measured (µg/L) | Sample Actual (mg/kg) | Sample Actual (µg/L) |
|---|---|---|---|---|---|---|---|
| 26 | K0902651-012D | 100 | 100 | ~ | -0.01 | | -0.01 |
| 27 | CCV3 | ~ | ~ | ~ | 4.95 | | 99% |
| 28 | CCB3 | ~ | ~ | ~ | -0.01 | | < 0.2 |
| 29 | K0902651-012S | 100 | 100 | ~ | 1.09 | | 109% |
| 30 | K0902528-001 | 100 | 100 | ~ | -0.01 | | -0.01 |
| 31 | ~~K0902347-001A~~ | ~~25~~ | ~~50~~ | ~ | ~~0.70~~ | Not needed | MS 3/31/09 |
| 32 | K0902663-MB | 100 | 100 | ~ | -0.01 | | -0.01 |
| 33 | LCSW K0902663 | 100 | 100 | ~ | 4.93 | | 99% |
| 34 | K0902663-004 | 50 | 50 | ~ | 0.00 | | 0.00 |
| 35 | K0902663-004A | 50 | 50 | ~ | 1.00 | | 100% |
| 36 | K0902663-004D | 50 | 50 | ~ | 0.00 | | 0.00 |
| 37 | K0902663-004S | 50 | 50 | ~ | 1.01 | | 101% |
| 38 | K0902663-005 | 50 | 50 | ~ | 0.00 | | 0.00 |
| 39 | CCV4 | ~ | ~ | ~ | 5.08 | | 102% |
| 40 | CCB4 | ~ | ~ | ~ | -0.01 | | < 0.2 |
| 41 | K0902663-006 | 50 | 50 | ~ | 0.00 | | 0.00 |
| 42 | K0902663-010 | 50 | 50 | ~ | 0.01 | | 0.01 |
| 43 | K0902663-011 | 50 | 50 | ~ | 0.01 | | 0.01 |
| 44 | K0902663-012 | 50 | 50 | ~ | 0.02 | | 0.02 |
| 45 | K0902663-016 | 50 | 50 | ~ | 0.00 | | 0.00 |
| 46 | K0902663-016D | 50 | 50 | ~ | 0.00 | | 0.00 |
| 47 | K0902663-016S | 50 | 50 | ~ | 0.99 | | 99% |
| 48 | K0902663-017 | 50 | 50 | ~ | 0.00 | | 0.00 |
| 49 | K0902663-018 | 50 | 50 | ~ | 0.00 | | 0.00 |
| 50 | K0902663-022 DISS | 50 | 50 | ~ | 0.00 | | 0.00 |

Comments: Reporting Levels:

Soil/Tissue Spike Level:

Post Spike Level:

| Method | Spike Level | MRL | LCS Limit | MS Limit | RPD |
|---|---|---|---|---|---|
| 7470A Water | 1.0 µg/L | 0.2 µg/L | 84-117% | 78-122% | 20% |
| 245.1 Water | 1.0 µg/L | 0.2 µg/L | 85-115% | 70-131% | 20% |
| 7470A TCLP | 5.0 µg/L | 1.0 µg/L | 85-115% | 75-125% | 20% |
| 7471A Soil LCSS | 1.77 mg/kg | 0.02 mg/kg | 76-121% | 64-127% | 30% |
| 7471A Tissue Tort | 3.37 mg/kg | 0.02 mg/kg | 63-130% | 60-130% | 30% |

| Analyst: | Date: | Page Number: |
|---|---|---|
| [illegible] | 3/31/09 | 2 |

[HgWaterRunForm] HG2.XLS

[redacted] PRINTOUT WITH:_____

ANALYTICAL WORKSHEET

| Method: (Circle One) 7470A 7471A 245.1 | Service Request # : |
|---|---|
| Analysis For: Hg | |

DATA

| Pos. | SAMPLE NUMBER | Initial Sample (g) or (mL) | Initial Dilution (mL) | Dilution Factor | Measured (µg/L) | Sample Actual (mg/kg) | Sample Actual (µg/L) |
|---|---|---|---|---|---|---|---|
| 51 | CCV5 | ~ | ~ | ~ | 5.01 | | 100% |
| 52 | CCB5 | ~ | ~ | ~ | -0.01 | | < 0.2 |
| 53 | K0902663-023 DISS | 50 | 50 | ~ | 0.00 | | 0.00 |
| 54 | K0902663-024 DISS | 50 | 50 | ~ | 0.01 | | 0.01 |
| 55 | K0902663-028 DISS | 50 | 50 | ~ | 0.01 | | 0.01 |
| 56 | K0902663-029 DISS | 50 | 50 | ~ | 0.01 | | 0.01 |
| 57 | K0902663-030 DISS | 50 | 50 | ~ | 0.01 | | 0.01 |
| 58 | K0902663-034 DISS | 50 | 50 | ~ | 0.00 | | 0.00 |
| 59 | K0902663-035 DISS | 50 | 50 | ~ | 0.00 | | 0.00 |
| 60 | K0902663-036 DISS | 50 | 50 | ~ | 0.00 | | 0.00 |
| 61 | CCV6 | ~ | ~ | ~ | 5.19 | | 104% |
| 62 | CCB6 | ~ | ~ | ~ | -0.01 | | < 0.2 |
| 63 | | | | | | | |
| 64 | | | | | | | |
| 65 | | | | | | | |
| 66 | | | | | | | |
| 67 | | | | | | | |
| 68 | | | | | | | |
| 69 | | | | | | | |
| 70 | | | | | | | |
| 71 | | | | | | | |
| 72 | | | | | | MS 3/31/09 | |
| 73 | | | | | | | |
| 74 | | | | | | | |
| 75 | | | | | | | |

Comments: Reporting Levels:

Soil/Tissue Spike Level:

Post Spike Level:

| Method | Spike Level | MRL | LCS Limit | MS Limit | RPD |
|---|---|---|---|---|---|
| 7470A Water | 1.0 µg/L | 0.2 µg/L | 84-117% | 78-122% | 20% |
| 245.1 Water | 1.0 µg/L | 0.2 µg/L | 85-115% | 70-131% | 20% |
| 7470A TCLP | 5.0 µg/L | 1.0 µg/L | 85-115% | 75-125% | 20% |
| 7471A Soil LCSS | 1.77 mg/kg | 0.02 mg/kg | 76-121% | 64-127% | 30% |
| 7471A Tissue Tort | 3.37 mg/kg | 0.02 mg/kg | 63-130% | 60-130% | 30% |

| Analyst: | Date: | Page Number: |
|---|---|---|
| Melissa Allcoth | 3/31/09 | 3 |

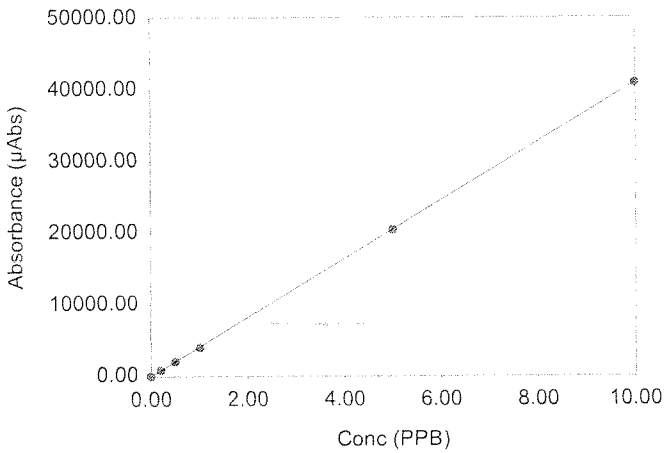
[HgWaterRunForm] HG3.XLS

# CETAC Hg Analysis Report - 09033102.DB - Tuesday, March 31, 2009, 4:14:36 PM

| | |
|---|---|
| **Analyst** | M SMITH |
| **Date Started** | Tuesday, March 31, 2009, 12:35:05 |
| **Worksheet** | Hg 093109B |
| **Comment** | K-CVAA-01 |

| Sample ID | Analysis Time | Conc (PPB) | %RSD | Avg. µAbs | Readings | | | | Flags |
|---|---|---|---|---|---|---|---|---|---|
| Calibration Zero | 31-Mar-2009, 12:35 | 0.00 | 31.90 | 13.50 | 9 | 18 | 17 | 11 | |
| Standard #1 | 31-Mar-2009, 12:36 | 0.20 | 1.84 | 864.00 | 843 | 862 | 871 | 880 | |
| Standard #2 | 31-Mar-2009, 12:38 | 0.50 | 0.18 | 2090.00 | 2085 | 2090 | 2080 | 2086 | |
| Standard #3 | 31-Mar-2009, 12:40 | 1.00 | 1.16 | 4040.00 | 3998 | 4016 | 4048 | 4105 | |
| Standard #4 | 31-Mar-2009, 12:42 | 5.00 | 1.14 | 20400.00 | 20072 | 20505 | 20528 | 20572 | |
| Standard #5 | 31-Mar-2009, 12:43 | 10.00 | 0.96 | 40900.00 | 40494 | 40715 | 41067 | 41385 | |

Calibration Data




| | |
|---|---|
| Int. | 0.000 |
| Slope | 4089.832 |
| Correlation | 1.00000 |

| Sample ID | Analysis Time | Conc (PPB) | %RSD | Avg. µAbs | Readings | | | | Flags |
|---|---|---|---|---|---|---|---|---|---|
| ICV1 | 31-Mar-2009, 12:45 | 4.99 | 1.06 | 20400.00 | 20136 | 20334 | 20437 | 20653 | |

| Sample ID | Analysis Time | Conc (PPB) | %RSD | Avg. µAbs | Readings | | | | Flags |
|---|---|---|---|---|---|---|---|---|---|
| ICB1 | 31-Mar-2009, 12:47 | -0.02 | 18.20 | -68.70 | -51 | -71 | -75 | -79 | |

| Sample ID | Analysis Time | Conc (PPB) | %RSD | Avg. µAbs | Readings | | | | Flags |
|---|---|---|---|---|---|---|---|---|---|
| CCV1 | 31-Mar-2009, 12:49 | 4.93 | 0.16 | 20200.00 | 20126 | 20181 | 20203 | 20174 | |

| Sample ID | Analysis Time | Conc (PPB) | %RSD | Avg. µAbs | Readings | | | | Flags |
|---|---|---|---|---|---|---|---|---|---|
| CCB1 | 31-Mar-2009, 12:50 | 0.05 | 8.51 | 224.00 | 235 | 229 | 235 | 196 | |

| Sample ID | Analysis Time | Conc (PPB) | %RSD | Avg. µAbs | Readings | | | | Flags |
|---|---|---|---|---|---|---|---|---|---|
| CRA1 | 31-Mar-2009, 12:56 | 0.19 | 2.19 | 788.00 | 770 | 780 | 794 | 810 | |

| Sample ID | Analysis Time | Conc (PPB) | %RSD | Avg. µAbs | Readings | | | | Flags |
|---|---|---|---|---|---|---|---|---|---|
| K0902479-MB | 31-Mar-2009, 12:58 | -0.01 | 12.70 | -23.40 | -27 | -23 | -25 | -20 | |
| LCSW K0902479 | 31-Mar-2009, 13:00 | 4.98 | 2.35 | 20400.00 | 20047 | 20073 | 20279 | 21069 | |
| K0902479-010 | 31-Mar-2009, 13:01 | 0.03 | 6.12 | 116.00 | 119 | 123 | 108 | 112 | |
| K0902479-010A | 31-Mar-2009, 13:03 | 0.99 | 1.86 | 4040.00 | 3950 | 4021 | 4080 | 4122 | |
| K0902347-001 | 31-Mar-2009, 13:06 | 0.05 | 5.39 | 220.00 | 203 | 228 | 222 | 227 | |
| K0902347-001A | 31-Mar-2009, 13:08 | 0.62 | 2.46 | 2550.00 | 2560 | 2637 | 2521 | 2492 | |
| K0902347-002 | 31-Mar-2009, 13:10 | -0.01 | 20.20 | -34.20 | -43 | -28 | -29 | -37 | |
| K0902347-002A | 31-Mar-2009, 13:13 | 0.26 | 23.90 | 1060.00 | 1291 | 1203 | 1018 | 718 | |
| K0902347-0003 | 31-Mar-2009, 13:15 | -0.04 | 3.12 | -182.00 | -181 | -176 | -182 | -190 | |

| Sample ID | Analysis Time | Conc (PPB) | %RSD | Avg. µAbs | Readings | | | | Flags |
|---|---|---|---|---|---|---|---|---|---|
| CCV2 | 31-Mar-2009, 14:35 | 5.23 | 0.37 | 21400.00 | 21404 | 21508 | 21379 | 21320 | |

| Sample ID | Analysis Time | Conc (PPB) | %RSD | Avg. µAbs | Readings | | | | Flags |
|---|---|---|---|---|---|---|---|---|---|
| CCB2 | 31-Mar-2009, 14:37 | -0.01 | 18.60 | -42.50 | -44 | -45 | -50 | -31 | |

| Sample ID | Analysis Time | Conc (PPB) | %RSD | Avg. µAbs | Readings | | | | Flags |
|---|---|---|---|---|---|---|---|---|---|
| K0902347-002A | 31-Mar-2009, 14:38 | 1.04 | 1.78 | 4250.00 | 4140 | 4243 | 4304 | 4298 | |
| K0902347-003 | 31-Mar-2009, 14:40 | -0.01 | 22.40 | -30.80 | -40 | -23 | -30 | -30 | |
| K0902347-003A | 31-Mar-2009, 14:42 | 1.02 | 1.20 | 4180.00 | 4139 | 4165 | 4156 | 4251 | |
| K0902347-004 | 31-Mar-2009, 14:44 | 0.00 | 52.90 | 15.00 | 6 | 19 | 12 | 24 | |
| K0902347-004A | 31-Mar-2009, 14:46 | 0.74 | 1.45 | 3020.00 | 2962 | 3012 | 3054 | 3054 | |

# CETAC Hg Analysis Report - 09033102.DB - Tuesday, March 31, 2009, 4:14:37 PM

| | |
|---|---|
| Analyst | M SMITH |
| Date Started | Tuesday, March 31, 2009, 14:47:53 |
| Worksheet | Hg 093109B |
| Comment | K-CVAA-01 |

| Sample ID | Analysis Time | Conc (PPB) | %RSD | Avg. µAbs | Readings | | | | Flags |
|---|---|---|---|---|---|---|---|---|---|
| K0902347-005 | 31-Mar-2009, 14:47 | -0.01 | 28.30 | -46.20 | -63 | -38 | -50 | -34 | |
| K0902347-005A | 31-Mar-2009, 14:49 | 1.03 | 2.32 | 4210.00 | 4068 | 4222 | 4285 | 4260 | |
| K0902651-011 | 31-Mar-2009, 14:51 | -0.01 | 30.80 | -38.10 | -55 | -31 | -38 | -28 | |
| K0902651-012 | 31-Mar-2009, 14:53 | -0.01 | 35.00 | -26.90 | -35 | -29 | -30 | -13 | |
| K0902651-012D | 31-Mar-2009, 14:55 | -0.01 | 30.40 | -21.50 | -27 | -25 | -12 | -21 | |

| Sample ID | Analysis Time | Conc (PPB) | %RSD | Avg. µAbs | Readings | | | | Flags |
|---|---|---|---|---|---|---|---|---|---|
| CCV3 | 31-Mar-2009, 14:56 | 4.95 | 1.96 | 20300.00 | 19804 | 20208 | 20273 | 20772 | |

| Sample ID | Analysis Time | Conc (PPB) | %RSD | Avg. µAbs | Readings | | | | Flags |
|---|---|---|---|---|---|---|---|---|---|
| CCB3 | 31-Mar-2009, 14:58 | -0.01 | 12.90 | -53.40 | -51 | -59 | -59 | -45 | |

| Sample ID | Analysis Time | Conc (PPB) | %RSD | Avg. µAbs | Readings | | | | Flags |
|---|---|---|---|---|---|---|---|---|---|
| K0902651-012S | 31-Mar-2009, 15:00 | 1.09 | 2.24 | 4460.00 | 4329 | 4426 | 4542 | 4529 | |
| K0902528-001 | 31-Mar-2009, 15:02 | -0.01 | 20.50 | -33.40 | -43 | -32 | -30 | -28 | |
| K0902347-001A | 31-Mar-2009, 15:15 | 0.70 | 0.73 | 2880.00 | 2898 | 2900 | 2855 | 2877 | |
| K0902663-MB | 31-Mar-2009, 15:16 | -0.01 | 37.30 | -30.10 | -44 | -33 | -26 | -18 | |
| LCSW K0902663 | 31-Mar-2009, 15:18 | 4.93 | 1.53 | 20200.00 | 20125 | 20402 | 20436 | 19769 | |
| K0902663-004 | 31-Mar-2009, 15:20 | -0.00 | 38.60 | -17.70 | -28 | -13 | -16 | -15 | |
| K0902663-004A | 31-Mar-2009, 15:22 | 1.00 | 5.28 | 4080.00 | 3891 | 3908 | 4168 | 4337 | |
| K0902663-004D | 31-Mar-2009, 15:24 | -0.00 | 118.00 | -12.50 | -32 | -2 | -0 | -16 | |
| K0902663-004S | 31-Mar-2009, 15:25 | 1.01 | 1.34 | 4110.00 | 4062 | 4140 | 4174 | 4067 | |
| K0902663-005 | 31-Mar-2009, 15:27 | 0.00 | 56.50 | 19.90 | 20 | 29 | 27 | 4 | |

| Sample ID | Analysis Time | Conc (PPB) | %RSD | Avg. µAbs | Readings | | | | Flags |
|---|---|---|---|---|---|---|---|---|---|
| CCV4 | 31-Mar-2009, 15:29 | 5.08 | 1.58 | 20800.00 | 20909 | 21095 | 20763 | 20324 | |

| Sample ID | Analysis Time | Conc (PPB) | %RSD | Avg. µAbs | Readings | | | | Flags |
|---|---|---|---|---|---|---|---|---|---|
| CCB4 | 31-Mar-2009, 15:31 | -0.01 | 20.90 | -59.30 | -77 | -60 | -52 | -49 | |

| Sample ID | Analysis Time | Conc (PPB) | %RSD | Avg. µAbs | Readings | | | | Flags |
|---|---|---|---|---|---|---|---|---|---|
| K0902663-006 | 31-Mar-2009, 15:33 | 0.00 | 55.90 | 18.90 | 6 | 16 | 25 | 29 | |
| K0902663-010 | 31-Mar-2009, 15:34 | 0.01 | 15.50 | 30.40 | 24 | 31 | 32 | 35 | |
| K0902663-011 | 31-Mar-2009, 15:36 | 0.01 | 33.00 | 41.20 | 22 | 42 | 48 | 53 | |
| K0902663-012 | 31-Mar-2009, 15:38 | 0.02 | 19.70 | 64.80 | 48 | 63 | 73 | 76 | |
| K0902663-016 | 31-Mar-2009, 15:40 | 0.00 | 76.60 | 10.90 | -1 | 19 | 14 | 12 | |
| K0902663-016D | 31-Mar-2009, 15:42 | -0.00 | 68.00 | -16.60 | -32 | -12 | -15 | -6 | |
| K0902663-016S | 31-Mar-2009, 15:43 | 0.99 | 0.15 | 4030.00 | 4036 | 4038 | 4028 | 4025 | |
| K0902663-017 | 31-Mar-2009, 15:45 | 0.00 | 88.70 | 19.60 | -6 | 24 | 30 | 30 | |
| K0902663-018 | 31-Mar-2009, 15:47 | 0.00 | 92.10 | 10.10 | -1 | 15 | 7 | 20 | |
| K0902663-022 DISS | 31-Mar-2009, 15:49 | 0.00 | 88.30 | 9.42 | -1 | 9 | 19 | 10 | |

| Sample ID | Analysis Time | Conc (PPB) | %RSD | Avg. µAbs | Readings | | | | Flags |
|---|---|---|---|---|---|---|---|---|---|
| CCV5 | 31-Mar-2009, 15:50 | 5.01 | 0.64 | 20500.00 | 20678 | 20381 | 20509 | 20427 | |

| Sample ID | Analysis Time | Conc (PPB) | %RSD | Avg. µAbs | Readings | | | | Flags |
|---|---|---|---|---|---|---|---|---|---|
| CCB5 | 31-Mar-2009, 15:52 | -0.01 | 7.26 | -56.30 | -62 | -52 | -55 | -56 | |

| Sample ID | Analysis Time | Conc (PPB) | %RSD | Avg. µAbs | Readings | | | | Flags |
|---|---|---|---|---|---|---|---|---|---|
| K0902663-023 DISS | 31-Mar-2009, 15:54 | 0.00 | 50.20 | 19.80 | 6 | 25 | 28 | 19 | |
| K0902663-024 DISS | 31-Mar-2009, 15:56 | 0.01 | 9.93 | 51.20 | 46 | 57 | 48 | 54 | |
| K0902663-028 DISS | 31-Mar-2009, 15:58 | 0.01 | 16.50 | 34.60 | 27 | 34 | 38 | 40 | |
| K0902663-029 DISS | 31-Mar-2009, 15:59 | 0.01 | 29.40 | 31.60 | 21 | 28 | 34 | 43 | |
| K0902663-030 DISS | 31-Mar-2009, 16:01 | 0.01 | 34.30 | 32.20 | 21 | 42 | 25 | 42 | |
| K0902663-034 DISS | 31-Mar-2009, 16:03 | 0.00 | 222.00 | 11.00 | -25 | 20 | 23 | 27 | |
| K0902663-035 DISS | 31-Mar-2009, 16:05 | 0.00 | 87.60 | 17.00 | -3 | 32 | 16 | 23 | |
| K0902663-036 DISS | 31-Mar-2009, 16:07 | -0.00 | 179.00 | -9.46 | -32 | -7 | -8 | 9 | |

| Sample ID | Analysis Time | Conc (PPB) | %RSD | Avg. µAbs | Readings | | | | Flags |
|---|---|---|---|---|---|---|---|---|---|
| CCV6 | 31-Mar-2009, 16:11 | 5.19 | 2.21 | 21200.00 | 20912 | 20920 | 21128 | 21901 | |

| Sample ID | Analysis Time | Conc (PPB) | %RSD | Avg. µAbs | Readings | | | | Flags |
|---|---|---|---|---|---|---|---|---|---|
| CCB6 | 31-Mar-2009, 16:13 | -0.01 | 27.50 | -21.40 | -28 | -24 | -18 | -15 | |

[redacted]

EPA METHOD 245.1

| | |
|---|---|
| Service Request Number(s) : | K0902479, K0902347, ~~K0902479~~, ~~K0902351~~ K0902651, K0902528 |
| PREP RUN: 84447, 84709 | |

| Sample | Initial Volume | Final Volume | Sample | Initial Volume | Final Volume |
|---|---|---|---|---|---|
| MB | 100 | 100 | | | |
| LCSW | | | | | |
| K0902479-010 | | | | | |
| ~~K0902479-010D~~ MS 3/30/09 | | | | | |
| K0902479-010S | | | | | |
| K0902347-001 | 25 | 50 | | | |
| K0902347-002 MS 3/30/09 | 50 | | | | |
| K0902347-003 | 50 | | | | |
| K0902347-004 | 5 | 100 | | | |
| K0902347-005 | 50 | 50 | | | |
| K0902651-011 | 100 | 100 | | | |
| - 012 | | | | | |
| - 012D | | | | | |
| - 012S | | | | | |
| K0902528-01 | | | | | |
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| | | | | | |
| | | MS 3/30/09 | | | |
| Std. 0.2 | 0.2 * | | | | 100 |
| Std. 0.5 | 0.5 * | | | | 100 |
| Std. 1.0 | 1.0 * | | | | 100 |
| Std. 5.0 | 5.0 * | | | | 100 |
| Std. 10.0 | 10.0 * | | | | 100 |
| ICV | 0.5 ** | | | | 100 |

**Start Time:** 11:30 **Finish Time:** 1:30 **Waterbath Temp.:** 95° C

**Lot # of Reagents Used:**

| | | |
|---|---|---|
| $HNO_3$: G44029 | $K_2S_2O_8$: G19476 | NaCl : E29582 |
| $H_2SO_4$: 46137 | $KMnO_4$: 25592 | $NH_2OH$-HCL: G06476 |
| HCL: 48262 | $SnCl_2$: G45629 | ERA CLP Soil: D045540 |

* Source Standard: HG180-N 100 ppb Spike = 1.0 ml * Source Standard

**Source Standard: ICV HG179-Y 1000 ppb LCSW= 0.5 ml ICV **Source Standard

Comments: K0902347 limited sample

| Analyst: | Date: |
|---|---|
| Melissa A. Allen | 3/30/09 |

[Copy of HGFORMnew.XLW] 245.1

[redacted]

EPA METHOD 245.1

| | |
|---|---|
| Service Request Number(s) : | K0902663 |
| PREP RUN: 84712 | |

| Sample | Initial Volume | Final Volume | Sample | Initial Volume | Final Volume |
|---|---|---|---|---|---|
| MB | 100 | 100 | | | |
| LCSW | | | | | |
| K0902663-004 Total | 50 | 50 | | | |
| K0902663-004D | | | | | |
| K0902663-004S | | | | | |
| K0902663-005 | | | | | |
| K0902663-006 | | | | | |
| K0902663-010 | | | | | |
| K0902663-011 | | | | | |
| K0902663-012 | | | | | |
| K0902663-016 | | | | | |
| K0902663-016D | | | | | |
| K0902663-016S | | | | | |
| K0902663-017 | | | | | |
| K0902663-018 | | | | | |
| K0902663-022 Diss | | | | | |
| K0902663-023 | | | | | |
| K0902663-024 | | | | | |
| K0902663-028 | | | | | |
| K0902663-029 | | | | | |
| K0902663-030 | | | | | |
| K0902663-034 | | | | | |
| K0902663-035 | | | | | |
| K0902663-036 | | | | | |
| | | | MS 3/30/09 | | |
| Std. 0.2 | 0.2 * | | | | 100 |
| Std. 0.5 | 0.5 * | | | | 100 |
| Std. 1.0 | 1.0 * | | | | 100 |
| Std. 5.0 | 5.0 * | | | | 100 |
| Std. 10.0 | 10.0 * | | | | 100 |
| ICV | 0.5 ** | | | | 100 |

**Start Time:** 1:45 **Finish Time:** 3:45 **Waterbath Temp.:** 95° C

**Lot # of Reagents Used:**

| | | |
|---|---|---|
| $HNO_3$: G44029 | $K_2S_2O_8$: G19476 | NaCl : E29582 |
| $H_2SO_4$: 46137 | $KMnO_4$: 25592 | $NH_2OH$-HCL: G06476 |
| HCL: 48262 | $SnCl_2$: G45629 | ERA CLP Soil: D045540 |

* Source Standard: HG1-80-N 100 ppb Spike = 0.5 ml * Source Standard

**Source Standard: ICV HG1-79-V 1000 ppb LCSW= 0.5 ml ICV **Source Standard

| | |
|---|---|
| Comments: | |
| | |
| Analyst: [signature] | Date: 3/30/09 |

[Copy of HGFORMnew.XLW] 245.1

Service Request # K0902663_____
Calibration _____040209D_____
QC in calibration__040209D_____
QC Service Request # K0902663_____
STARLIMS # 148620_____

# ICP-MS Data Review Form

| | Yes | No | NA |
|---|---|---|---|
| 1. Appropriate standardization completed | X | | |
| 2. ICV within 10 % of true value | X | | |
| 3. CCV's in control | X | | |
| 4. CCB's and/or ICB's below MRL | X | | |
| 5. Method blank below MRL | X | | |
| 6. LCS in control | X | | |
| 7. Spike and duplicate in control | X | | |
| 8. All analytes within instrument linear range | X | | |
| 9. Adequate rinse out time allowed | X | | |
| 10. Internal standards in control | X | | |
| 11. Interferences checked | X | | |
| 12. Se over MRL | | | X |
| 13. CRA run | X | | |
| 14. ICSA and ICSAB in control | | | X |
| 15. Serial dilution run | | | X |
| 16. Post spike in control | | | X |

Comments:

Primary Review by _____ Date 4/2/09
Secondary Review by JDB Date 4/3/09
R:\icp\misc\data review forms\PQ ExCell review form

## Sample List

| Num | Label | Type | Weight | Volume | Dilution | Rack | Row | Column | Height |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Cal. Blk | Blank | 0 kg | 0 ml | 1.00 | 0 | 1 | 1 | 145 |
| 2 | Cal. Stn(MS12-88-C) | Fully Quant Standard | 0 kg | 0 ml | 1.00 | 0 | 1 | 2 | 145 |
| 3 | ICV1(MS12-84-B) | Unknown | 0 kg | 0 ml | 1.00 | 0 | 1 | 3 | 145 |
| 4 | CCV1(MS12-88-C) | Unknown | 0 kg | 0 ml | 1.00 | 0 | 1 | 2 | 145 |
| 5 | ICB1 | Unknown | 0 kg | 0 ml | 1.00 | 0 | 1 | 1 | 145 |
| 6 | CCB1 | Unknown | 0 kg | 0 ml | 1.00 | 0 | 1 | 1 | 145 |
| 7 | WATER CRA(MS12-88-B) | Unknown | 0 kg | 0 ml | 1.00 | 0 | 1 | 4 | 145 |
| 8 | K0902663-MB | Unknown | 0 kg | 0 ml | 1.00 | 2 | 1 | 1 | 145 |
| 9 | LCSW K0902663 | Unknown | 0 kg | 0 ml | 1.00 | 2 | 1 | 2 | 145 |
| 10 | K0902663-001 | Unknown | 0 kg | 0 ml | 1.00 | 2 | 1 | 3 | 145 |
| 11 | K0902663-001D | Unknown | 0 kg | 0 ml | 1.00 | 2 | 1 | 4 | 145 |
| 12 | K0902663-002 | Unknown | 0 kg | 0 ml | 1.00 | 2 | 1 | 5 | 145 |
| 13 | K0902663-003 | Unknown | 0 kg | 0 ml | 1.00 | 2 | 1 | 6 | 145 |
| 14 | K0902663-007 | Unknown | 0 kg | 0 ml | 1.00 | 2 | 1 | 7 | 145 |
| 15 | K0902663-008 | Unknown | 0 kg | 0 ml | 1.00 | 2 | 1 | 8 | 145 |
| 16 | K0902663-009 | Unknown | 0 kg | 0 ml | 1.00 | 2 | 1 | 9 | 145 |
| 17 | CCV2 | Unknown | 0 kg | 0 ml | 1.00 | 0 | 1 | 2 | 145 |
| 18 | CCB2 | Unknown | 0 kg | 0 ml | 1.00 | 0 | 1 | 1 | 145 |
| 19 | K0902663-013 | Unknown | 0 kg | 0 ml | 1.00 | 2 | 1 | 10 | 145 |
| 20 | K0902663-013S | Unknown | 0 kg | 0 ml | 1.00 | 2 | 1 | 11 | 145 |
| 21 | K0902663-014 | Unknown | 0 kg | 0 ml | 1.00 | 2 | 1 | 12 | 145 |
| 22 | K0902663-015 | Unknown | 0 kg | 0 ml | 1.00 | 2 | 2 | 1 | 145 |
| 23 | K0902663-019 | Unknown | 0 kg | 0 ml | 1.00 | 2 | 2 | 2 | 145 |
| 24 | K0902663-019D | Unknown | 0 kg | 0 ml | 1.00 | 2 | 2 | 3 | 145 |
| 25 | K0902663-020 | Unknown | 0 kg | 0 ml | 1.00 | 2 | 2 | 4 | 145 |
| 26 | K0902663-021 | Unknown | 0 kg | 0 ml | 1.00 | 2 | 2 | 5 | 145 |
| 27 | K0902663-025 | Unknown | 0 kg | 0 ml | 1.00 | 2 | 2 | 6 | 145 |
| 28 | K0902663-025S | Unknown | 0 kg | 0 ml | 1.00 | 2 | 2 | 7 | 145 |
| 29 | CCV3 | Unknown | 0 kg | 0 ml | 1.00 | 0 | 1 | 2 | 145 |
| 30 | CCB3 | Unknown | 0 kg | 0 ml | 1.00 | 0 | 1 | 1 | 145 |
| 31 | K0902663-026 | Unknown | 0 kg | 0 ml | 1.00 | 2 | 2 | 8 | 145 |
| 32 | K0902663-027 | Unknown | 0 kg | 0 ml | 1.00 | 2 | 2 | 9 | 145 |
| 33 | K0902663-031 | Unknown | 0 kg | 0 ml | 1.00 | 2 | 2 | 10 | 145 |
| 34 | K0902663-032 | Unknown | 0 kg | 0 ml | 1.00 | 2 | 2 | 11 | 145 |
| 35 | K0902663-033 | Unknown | 0 kg | 0 ml | 1.00 | 2 | 2 | 12 | 145 |
| 36 | CCV4 | Unknown | 0 kg | 0 ml | 1.00 | 0 | 1 | 2 | 145 |
| 37 | CCB4 | Unknown | 0 kg | 0 ml | 1.00 | 0 | 1 | 1 | 145 |

## Instrument Setup - Sample Configuration

| Sample | Configuration | Date |
|---|---|---|
| All Samples | acqmet11 | 8:38:38 4/2/09 |

## Instrument Setup - Configurations

**Configuration Name -** acqmet11
**Description -** PQExcell CCT Sim Default
**Date -** 8:38:38 4/2/09
**Maximum Uptake Time -** 0
**Maximum Washout Time -** 0
**S-Option Pump Running -** No
**Plasma Screen Forward -** No
**Makeup Gas On -** No
**Use CCT -** No
**Use Accessory Gas -** No

| Setting | Value |
|---|---|
| Extraction | -600.00 |
| Lens1 | 10.00 |
| Lens2 | -55.00 |
| Lens3 | -10.00 |
| Pole Bias | 3.00 |
| Sampling Depth | 350.00 |
| Horizontal | -55.00 |
| Vertical | 40.00 |
| Cool | 13.00 |
| Auxiliary | 0.70 |
| Nebuliser | 0.80 |
| Forward power | 1,410.00 |
| HT1 Voltage | 1,900.00 |
| HT2 Voltage | 2,600.00 |
| D1 | -35.00 |
| Focus | 14.00 |

ExCell Mass Calibration Date: 4/2/2009

| Mass | Mass DAC | Peak Width (AMU) | Error (AMU) | Include |
|---|---|---|---|---|
| 6.015 | 1282 | 0.818 | -0.078 | TRUE |
| 7.016 | 1542 | 0.818 | -0.056 | TRUE |
| 9.012 | 2062 | 0.818 | -0.007 | TRUE |
| 23.985 | 5885 | 0.767 | 0.055 | TRUE |
| 24.986 | 6132 | 0.767 | 0.026 | TRUE |
| 25.983 | 6392 | 0.767 | 0.051 | TRUE |
| 26.982 | 6639 | 0.767 | 0.024 | TRUE |
| 45.953 | 11472 | 0.715 | 0.054 | TRUE |
| 51.94 | 12986 | 0.869 | 0.019 | TRUE |
| 53.949 | 13493 | 0.869 | 0.003 | TRUE |
| 55.935 | 14000 | 0.869 | 0.01 | TRUE |
| 56.935 | 14254 | 0.818 | 0.008 | TRUE |
| 57.934 | 14507 | 0.869 | 0.003 | TRUE |
| 58.933 | 14754 | 0.869 | -0.025 | TRUE |
| 59.931 | 15008 | 0.818 | -0.024 | TRUE |
| 75.92 | 19083 | 0.868 | 0.002 | TRUE |
| 77.919 | 19584 | 0.817 | -0.028 | TRUE |
| 114.904 | 28998 | 0.868 | -0.03 | TRUE |
| 139.905 | 35368 | 0.868 | -0.019 | TRUE |
| 141.908 | 35882 | 0.817 | -0.004 | TRUE |
| 155.923 | 39450 | 0.867 | -0.012 | TRUE |
| 205.974 | 52210 | 0.816 | 0.006 | TRUE |
| 206.976 | 52470 | 0.816 | 0.024 | TRUE |
| 207.977 | 52717 | 0.816 | -0.008 | TRUE |
| 208.98 | 52977 | 0.816 | 0.008 | TRUE |
| 238.051 | 60387 | 0.816 | -0.003 | TRUE |

Excluded In Calib | Excluded In Results | Cal Fail Excluded | Multi Element | Semi Quant | Internal Standard | Standard Addition

Uncorrected ICPS Per Mass

S-Calibration Has Edited Standard
F-Interference Correction Failed
E-Calibration Edited
T-Tripped
I-Invalid Calibration
P-Pulse Counting
V-Valley Integration Failed
M-Result Over Max

| Run | Label | TimeStamp | 58Ni | 7Li | 9Be | 59Co | 115In | 208Pb |
|---|---|---|---|---|---|---|---|---|
| 1 | Stability 04/02/09 | 4/2/2009 8:54:25 AM | (P)2.000 | (P)31630.481 | (P)8078.952 | (P)90970.480 | (P)90605.935 | (P)33835.523 |
| 2 | Stability 04/02/09 | 4/2/2009 8:55:27 AM | (P)2.667 | (P)32652.446 | (P)8402.472 | (P)92085.271 | (P)91250.848 | (P)34659.160 |
| 3 | Stability 04/02/09 | 4/2/2009 8:56:29 AM | (P)2.167 | (P)32896.500 | (P)8469.177 | (P)93122.622 | (P)92824.116 | (P)34978.605 |
| 4 | Stability 04/02/09 | 4/2/2009 8:57:31 AM | (P)3.333 | (P)32143.792 | (P)8283.402 | (P)93898.559 | (P)93152.559 | (P)34888.551 |
| 5 | Stability 04/02/09 | 4/2/2009 8:58:33 AM | (P)2.500 | (P)31758.598 | (P)8205.191 | (P)92554.249 | (P)93863.872 | (P)35604.314 |
| | Mean of Stability 04/02 | 4/2/2009 8:54:25 AM | (P)2.533 | (P)32216.363 | (P)8287.839 | (P)92526.236 | (P)92339.466 | (P)34793.231 |
| | SD of Stability 04/02/09 | | (P)0.519 | (P)550.188 | (P)155.329 | (P)1101.653 | (P)1361.069 | (P)639.626 |
| | %RSD of Stability 04 | | (P)20.490 | (P)1.708 | (P)1.874 | (P)1.191 | (P)1.474 | (P)1.838 |

| Run | Label | TimeStamp | 209Bi | 220Hg | 238U |
|---|---|---|---|---|---|
| 1 | Stability 04/02/09 | 4/2/2009 8:54:25 AM | (P)52813.461 | (P)0.333 | (P)53582.808 |
| 2 | Stability 04/02/09 | 4/2/2009 8:55:27 AM | (P)53326.019 | (P)0.167 | (P)53485.440 |
| 3 | Stability 04/02/09 | 4/2/2009 8:56:29 AM | (P)54354.044 | (P)0.167 | (P)54366.761 |
| 4 | Stability 04/02/09 | 4/2/2009 8:57:31 AM | (P)54483.705 | (P)0.333 | (P)54527.533 |
| 5 | Stability 04/02/09 | 4/2/2009 8:58:33 AM | (P)54746.870 | (P)0.000 | (P)56091.748 |
| | Mean of Stability 04/02 | 4/2/2009 8:54:25 AM | (P)53944.820 | (P)0.200 | (P)54410.858 |
| | SD of Stability 04/02/09 | | (P)831.269 | (P)0.139 | (P)1046.783 |
| | %RSD of Stability 04 | | (P)1.541 | (P)69.722 | (P)1.924 |

Instrument ID: K-ICP-MS-02
Experiment: 04-02-09D
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: [redacted]
STARLIMS # 148620

| Sample Name: | | Cal. Blk | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 4/2/09 12:56 | | | | | |
| Copper | 63 | 0.0001 | -0.001 | 0.0009 | **0** | 0.0009 | 0 |
| Copper | 65 | 0.0013 | -0.0009 | -0.0004 | **0** | 0.0011 | 0 |
| Lead | 206 | -0.0011 | 0.0005 | 0.0006 | **0** | 0.001 | 0 |
| Lead | 207 | -0.0018 | -0.0019 | 0.0037 | **0** | 0.0032 | 0 |
| Lead | 208 | 0.0002 | -0.0018 | 0.0016 | **0** | 0.0017 | 0 |
| Zinc | 66 | -0.0061 | 0.0012 | 0.0049 | **0** | 0.0056 | 0 |
| Zinc | 67 | -0.0138 | -0.001 | 0.0149 | **0** | 0.0144 | 0 |
| Zinc | 68 | 0.0075 | -0.0002 | -0.0073 | **0** | 0.0074 | 0 |

Internal Standard Factors:

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Gallium | 71 | 1.002 | 1.008 | 0.99 | **1.002** | n/a | n/a |
| Lutetium | 175 | 1.003 | 0.997 | 1 | **1.003** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 04-02-09D
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: [redacted]
STARLIMS # 148620

| Sample Name: | | Cal. Stn(MS12-88-C) | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 4/2/09 12:58 | | | | | |
| Copper | 63 | 25.03 | 24.64 | 25.33 | **25** | 0.3473 | 1.389 |
| Copper | 65 | 25 | 24.84 | 25.15 | **25** | 0.1567 | 0.6268 |
| Lead | 206 | 25.02 | 24.69 | 25.29 | **25** | 0.2965 | 1.186 |
| Lead | 207 | 24.65 | 24.93 | 25.43 | **25** | 0.3942 | 1.577 |
| Lead | 208 | 24.71 | 24.92 | 25.37 | **25** | 0.3384 | 1.353 |
| Zinc | 66 | 25.08 | 24.67 | 25.25 | **25** | 0.2991 | 1.196 |
| Zinc | 67 | 25.32 | 24.55 | 25.13 | **25** | 0.4044 | 1.618 |
| Zinc | 68 | 25.13 | 24.74 | 25.13 | **25** | 0.2248 | 0.8994 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Gallium | 71 | 0.974 | 0.953 | 0.963 | **0.974** | n/a | n/a |
| Lutetium | 175 | 0.971 | 0.971 | 0.979 | **0.971** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 04-02-09D
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: [redacted]
STARLIMS # 148620

| Sample Name: | | ICV1(MS12-84-B) | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 4/2/09 13:00 | | | | | |
| Copper | 63 | 12.27 | 12.32 | 12.29 | **12.3** | 0.0275 | 0.2239 |
| Copper | 65 | 12.38 | 12.59 | 12.48 | **12.48** | 0.103 | 0.8254 |
| Lead | 206 | 25.3 | 24.88 | 25.85 | **25.34** | 0.4862 | 1.919 |
| Lead | 207 | 25.41 | 24.93 | 25.16 | **25.17** | 0.2412 | 0.9582 |
| Lead | 208 | 24.93 | 24.85 | 25.16 | **24.98** | 0.1601 | 0.6409 |
| Zinc | 66 | 25.51 | 25.4 | 25.59 | **25.5** | 0.0948 | 0.3717 |
| Zinc | 67 | 31.07 | 30.86 | 31.21 | **31.05** | 0.1723 | 0.555 |
| Zinc | 68 | 30.09 | 30.12 | 29.9 | **30.04** | 0.1222 | 0.407 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Gallium | 71 | 0.976 | 0.969 | 0.968 | **0.976** | n/a | n/a |
| Lutetium | 175 | 0.979 | 0.964 | 0.985 | **0.979** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 04-02-09D
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: [redacted]
STARLIMS # 148620

| Sample Name: | | CCV1(MS12-88-C) | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 4/2/09 13:03 | | | | | |
| Copper | 63 | 24.81 | 24.71 | 25.33 | **24.95** | 0.3298 | 1.322 |
| Copper | 65 | 24.93 | 24.95 | 25.61 | **25.16** | 0.3878 | 1.541 |
| Lead | 206 | 25.29 | 25.47 | 25.37 | **25.38** | 0.0912 | 0.3593 |
| Lead | 207 | 24.77 | 25.09 | 25.26 | **25.04** | 0.2479 | 0.99 |
| Lead | 208 | 24.97 | 25.32 | 24.95 | **25.08** | 0.2086 | 0.8318 |
| Zinc | 66 | 24.98 | 25.01 | 25.32 | **25.1** | 0.1912 | 0.7618 |
| Zinc | 67 | 25.11 | 24.99 | 25.16 | **25.09** | 0.09 | 0.3587 |
| Zinc | 68 | 25 | 24.84 | 25.32 | **25.05** | 0.2452 | 0.9789 |

Internal Standard Factors:

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Gallium | 71 | 0.967 | 0.956 | 0.973 | **0.967** | n/a | n/a |
| Lutetium | 175 | 0.965 | 0.981 | 0.978 | **0.965** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 04-02-09D
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: [redacted]
STARLIMS # 148620

| Sample Name: | | ICB1 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 4/2/09 13:05 | | | | | |
| Copper | 63 | 0.0079 | 0.0145 | 0.0116 | **0.0113** | 0.0033 | 29.12 |
| Copper | 65 | 0.0154 | 0.0113 | 0.0204 | **0.0157** | 0.0046 | 29.13 |
| Lead | 206 | 0.0167 | 0.0186 | 0.0179 | **0.0177** | 0.001 | 5.617 |
| Lead | 207 | 0.0141 | 0.0196 | 0.0222 | **0.0186** | 0.0041 | 22.25 |
| Lead | 208 | 0.0146 | 0.0193 | 0.0192 | **0.0177** | 0.0027 | 15.26 |
| Zinc | 66 | 0.0071 | 0.0195 | 0.0077 | **0.0114** | 0.007 | 61.17 |
| Zinc | 67 | 0.0549 | 0.0429 | 0.0498 | **0.0492** | 0.006 | 12.21 |
| Zinc | 68 | 0.0217 | 0.016 | 0.0314 | **0.0231** | 0.0078 | 33.71 |

Internal Standard Factors:

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Gallium | 71 | 0.987 | 0.986 | 0.985 | **0.987** | n/a | n/a |
| Lutetium | 175 | 0.981 | 0.994 | 0.997 | **0.981** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 04-02-09D
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: [redacted]
STARLIMS # 148620

| Sample Name: | | CCB1 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 4/2/09 13:07 | | | | | |
| Copper | 63 | 0.0058 | 0.0057 | 0.0099 | **0.0071** | 0.0024 | 33.39 |
| Copper | 65 | 0.0046 | 0.0065 | 0.0101 | **0.0071** | 0.0028 | 39.46 |
| Lead | 206 | 0.0081 | 0.0119 | 0.017 | **0.0124** | 0.0044 | 35.87 |
| Lead | 207 | 0.0076 | 0.0083 | 0.0114 | **0.0091** | 0.002 | 22.44 |
| Lead | 208 | 0.0069 | 0.0104 | 0.015 | **0.0108** | 0.004 | 37.56 |
| Zinc | 66 | -0.0021 | 0.0141 | 0.015 | **0.009** | 0.0096 | 106.6 |
| Zinc | 67 | 0.019 | 0.0359 | 0.0244 | **0.0264** | 0.0086 | 32.56 |
| Zinc | 68 | -0.0056 | 0.0088 | 0.0096 | **0.0043** | 0.0086 | 201.1 |

Internal Standard Factors:

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Gallium | 71 | 0.995 | 0.995 | 0.998 | **0.995** | n/a | n/a |
| Lutetium | 175 | 0.964 | 1.001 | 1.043 | **0.964** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 04-02-09D
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: [redacted]
STARLIMS # 148620

| Sample Name: | | WATER CRA(MS12-88-B) | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 4/2/09 13:09 | | | | | |
| Copper | 63 | 0.0922 | 0.0981 | 0.1054 | **0.0986** | 0.0066 | 6.699 |
| Copper | 65 | 0.0982 | 0.1083 | 0.1016 | **0.1027** | 0.0052 | 5.017 |
| Lead | 206 | 0.0148 | 0.0164 | 0.0196 | **0.0169** | 0.0025 | 14.5 |
| Lead | 207 | 0.0199 | 0.0183 | 0.0167 | **0.0183** | 0.0016 | 8.642 |
| Lead | 208 | 0.0162 | 0.0175 | 0.0174 | **0.017** | 0.0007 | 4.099 |
| Zinc | 66 | 0.5141 | 0.5132 | 0.5244 | **0.5172** | 0.0063 | 1.21 |
| Zinc | 67 | 0.4914 | 0.4465 | 0.4465 | **0.4615** | 0.0259 | 5.615 |
| Zinc | 68 | 0.4669 | 0.4962 | 0.4923 | **0.4852** | 0.0159 | 3.282 |

Internal Standard Factors:

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Gallium | 71 | 0.986 | 0.988 | 0.988 | **0.986** | n/a | n/a |
| Lutetium | 175 | 1.011 | 1.018 | 1 | **1.011** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 04-02-09D
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: [redacted]
STARLIMS # 148620

| Sample Name: | | K0902663-MB | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 4/2/09 13:12 | | | | | |
| Copper | 63 | 0.0013 | -0.0012 | -0.0065 | **-0.0021** | 0.004 | 187.1 |
| Copper | 65 | 0.0006 | -0.0031 | -0.0061 | **-0.0029** | 0.0034 | 118.4 |
| Lead | 206 | -0.0152 | -0.0128 | -0.0139 | **-0.014** | 0.0012 | 8.72 |
| Lead | 207 | -0.0133 | -0.015 | -0.0129 | **-0.0137** | 0.0011 | 7.851 |
| Lead | 208 | -0.0142 | -0.0138 | -0.0133 | **-0.0138** | 0.0004 | 3.258 |
| Zinc | 66 | 0.211 | 0.2104 | 0.2065 | **0.2093** | 0.0024 | 1.154 |
| Zinc | 67 | 0.1892 | 0.1551 | 0.1835 | **0.1759** | 0.0183 | 10.38 |
| Zinc | 68 | 0.1939 | 0.2046 | 0.2097 | **0.2027** | 0.0081 | 3.987 |

Internal Standard Factors:

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Gallium | 71 | 0.997 | 0.992 | 0.983 | **0.997** | n/a | n/a |
| Lutetium | 175 | 0.995 | 1.045 | 1.018 | **0.995** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 04-02-09D
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: [redacted]
STARLIMS # 148620

| Sample Name: | | LCSW K0902663 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 4/2/09 13:14 | | | | | |
| Copper | 63 | 19.34 | 19.54 | 19.49 | **19.46** | 0.1076 | 0.553 |
| Copper | 65 | 19.44 | 19.45 | 19.3 | **19.4** | 0.0803 | 0.4142 |
| Lead | 206 | 19.68 | 19.22 | 19.79 | **19.56** | 0.3008 | 1.538 |
| Lead | 207 | 19.72 | 18.91 | 19.46 | **19.37** | 0.4132 | 2.134 |
| Lead | 208 | 19.16 | 18.95 | 19.38 | **19.16** | 0.2116 | 1.104 |
| Zinc | 66 | 19.68 | 19.71 | 19.71 | **19.7** | 0.0159 | 0.0807 |
| Zinc | 67 | 19.64 | 19.52 | 19.22 | **19.46** | 0.2214 | 1.138 |
| Zinc | 68 | 19.45 | 19.71 | 19.45 | **19.54** | 0.1493 | 0.7644 |

Internal Standard Factors:

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Gallium | 71 | 0.969 | 0.963 | 0.96 | **0.969** | n/a | n/a |
| Lutetium | 175 | 0.968 | 0.95 | 0.978 | **0.968** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 04-02-09D
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: [redacted]
STARLIMS # 148620

| Sample Name: | | K0902663-001 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 4/2/09 13:16 | | | | | |
| Copper | 63 | 8.219 | 8.227 | 8.022 | **8.156** | 0.1162 | 1.425 |
| Copper | 65 | 8.256 | 8.307 | 8.093 | **8.219** | 0.1116 | 1.358 |
| Lead | 206 | 4.368 | 4.366 | 4.254 | **4.329** | 0.065 | 1.502 |
| Lead | 207 | 4.241 | 4.213 | 4.261 | **4.238** | 0.024 | 0.566 |
| Lead | 208 | 4.241 | 4.21 | 4.199 | **4.217** | 0.0218 | 0.5166 |
| Zinc | 66 | 35.87 | 36.82 | 35.46 | **36.05** | 0.6966 | 1.933 |
| Zinc | 67 | 33.55 | 33.39 | 32.45 | **33.13** | 0.5952 | 1.797 |
| Zinc | 68 | 34.94 | 35.62 | 34.81 | **35.13** | 0.4331 | 1.233 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Gallium | 71 | 0.966 | 0.972 | 0.949 | **0.966** | n/a | n/a |
| Lutetium | 175 | 0.992 | 0.988 | 0.984 | **0.992** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 04-02-09D
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: [redacted]
STARLIMS # 148620

| Sample Name: | | K0902663-001D | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 4/2/09 13:19 | | | | | |
| Copper | 63 | 8.188 | 8.225 | 8.186 | **8.2** | 0.0218 | 0.2652 |
| Copper | 65 | 8.298 | 8.279 | 8.38 | **8.319** | 0.0534 | 0.6418 |
| Lead | 206 | 4.359 | 4.364 | 4.382 | **4.368** | 0.0119 | 0.2718 |
| Lead | 207 | 4.248 | 4.233 | 4.435 | **4.305** | 0.1127 | 2.617 |
| Lead | 208 | 4.273 | 4.256 | 4.334 | **4.288** | 0.0409 | 0.9541 |
| Zinc | 66 | 36.57 | 36.17 | 36.76 | **36.5** | 0.2993 | 0.8199 |
| Zinc | 67 | 33.17 | 33.28 | 33.28 | **33.24** | 0.0631 | 0.1899 |
| Zinc | 68 | 35.16 | 35.03 | 35.48 | **35.22** | 0.2356 | 0.6689 |

Internal Standard Factors:

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Gallium | 71 | 0.976 | 0.968 | 0.977 | **0.976** | n/a | n/a |
| Lutetium | 175 | 0.993 | 0.99 | 1.009 | **0.993** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 04-02-09D
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: [redacted]
STARLIMS # 148620

| Sample Name: | | K0902663-002 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 4/2/09 13:21 | | | | | |
| Copper | 63 | 8.304 | 8.317 | 8.335 | **8.319** | 0.0154 | 0.1853 |
| Copper | 65 | 8.424 | 8.344 | 8.397 | **8.388** | 0.0409 | 0.4871 |
| Lead | 206 | 4.382 | 4.405 | 4.242 | **4.343** | 0.0881 | 2.03 |
| Lead | 207 | 4.322 | 4.369 | 4.172 | **4.288** | 0.1027 | 2.396 |
| Lead | 208 | 4.314 | 4.278 | 4.161 | **4.251** | 0.0801 | 1.883 |
| Zinc | 66 | 36.69 | 37.32 | 37 | **37.01** | 0.3157 | 0.853 |
| Zinc | 67 | 33.87 | 33.66 | 33.25 | **33.59** | 0.3176 | 0.9455 |
| Zinc | 68 | 35.46 | 35.44 | 35.79 | **35.57** | 0.197 | 0.554 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Gallium | 71 | 0.974 | 0.969 | 0.971 | **0.974** | n/a | n/a |
| Lutetium | 175 | 1.007 | 1.003 | 0.984 | **1.007** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 04-02-09D
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: [redacted]
STARLIMS # 148620

| Sample Name: | | K0902663-003 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 4/2/09 13:23 | | | | | |
| Copper | 63 | 7.956 | 8.041 | 8.061 | **8.019** | 0.0555 | 0.6916 |
| Copper | 65 | 8.207 | 8.145 | 7.989 | **8.114** | 0.1121 | 1.381 |
| Lead | 206 | 4.19 | 4.217 | 4.214 | **4.207** | 0.0149 | 0.3549 |
| Lead | 207 | 4.129 | 4.007 | 4.142 | **4.093** | 0.0743 | 1.814 |
| Lead | 208 | 4.066 | 4.101 | 4.156 | **4.108** | 0.0454 | 1.104 |
| Zinc | 66 | 36.23 | 36.01 | 36.25 | **36.17** | 0.133 | 0.3679 |
| Zinc | 67 | 32.84 | 32.77 | 33.01 | **32.87** | 0.1216 | 0.37 |
| Zinc | 68 | 34.73 | 35.21 | 34.7 | **34.88** | 0.2834 | 0.8125 |

Internal Standard Factors:

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Gallium | 71 | 0.973 | 0.971 | 0.969 | **0.973** | n/a | n/a |
| Lutetium | 175 | 0.991 | 0.989 | 1.011 | **0.991** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 04-02-09D
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: [redacted]
STARLIMS # 148620

| Sample Name: | | K0902663-007 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 4/2/09 13:25 | | | | | |
| Copper | 63 | 30.22 | 30.48 | 30.78 | **30.49** | 0.2789 | 0.9147 |
| Copper | 65 | 30.22 | 30.57 | 30.7 | **30.5** | 0.2504 | 0.821 |
| Lead | 206 | 24.19 | 25.68 | 26.18 | **25.35** | 1.033 | 4.077 |
| Lead | 207 | 23.99 | 25.02 | 24.9 | **24.64** | 0.5618 | 2.281 |
| Lead | 208 | 24.02 | 25.24 | 25.15 | **24.8** | 0.681 | 2.746 |
| Zinc | 66 | 135.6 | 136 | 136.4 | **136** | 0.3881 | 0.2854 |
| Zinc | 67 | 124.9 | 124.5 | 126.8 | **125.4** | 1.208 | 0.9631 |
| Zinc | 68 | 132.8 | 133.6 | 133.9 | **133.4** | 0.54 | 0.4048 |

Internal Standard Factors:

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Gallium | 71 | 0.988 | 0.986 | 0.994 | **0.988** | n/a | n/a |
| Lutetium | 175 | 1.019 | 1.06 | 1.064 | **1.019** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 04-02-09D
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: [redacted]
STARLIMS # 148620

| Sample Name: | | K0902663-008 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 4/2/09 13:28 | | | | | |
| Copper | 63 | 30.71 | 30.75 | 30.75 | **30.74** | 0.0224 | 0.0728 |
| Copper | 65 | 30.62 | 30.52 | 30.36 | **30.5** | 0.1297 | 0.4254 |
| Lead | 206 | 24.87 | 25.03 | 25.63 | **25.18** | 0.3994 | 1.586 |
| Lead | 207 | 24.95 | 24.47 | 24.93 | **24.78** | 0.2752 | 1.11 |
| Lead | 208 | 24.49 | 24.28 | 24.69 | **24.48** | 0.2052 | 0.838 |
| Zinc | 66 | 136.3 | 136.5 | 135.5 | **136.1** | 0.4827 | 0.3547 |
| Zinc | 67 | 125 | 126.7 | 125.7 | **125.8** | 0.8474 | 0.6738 |
| Zinc | 68 | 133.1 | 134.2 | 134.2 | **133.8** | 0.6242 | 0.4663 |

Internal Standard Factors:

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Gallium | 71 | 0.987 | 0.984 | 0.98 | **0.987** | n/a | n/a |
| Lutetium | 175 | 1.038 | 1.028 | 1.046 | **1.038** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 04-02-09D
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: [redacted]
STARLIMS # 148620

| Sample Name: | | K0902663-009 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 4/2/09 13:30 | | | | | |
| Copper | 63 | 31.07 | 31.28 | 31.05 | **31.14** | 0.1294 | 0.4157 |
| Copper | 65 | 30.71 | 30.96 | 30.71 | **30.79** | 0.1414 | 0.4593 |
| Lead | 206 | 25.14 | 25.41 | 24.95 | **25.17** | 0.2297 | 0.9128 |
| Lead | 207 | 24.42 | 25.26 | 24.18 | **24.62** | 0.5692 | 2.312 |
| Lead | 208 | 24.22 | 25.23 | 24.5 | **24.65** | 0.5185 | 2.103 |
| Zinc | 66 | 137.2 | 138.2 | 137.6 | **137.6** | 0.5317 | 0.3863 |
| Zinc | 67 | 126 | 127.5 | 126.9 | **126.8** | 0.7557 | 0.5958 |
| Zinc | 68 | 133.2 | 135.6 | 135.2 | **134.7** | 1.266 | 0.94 |

Internal Standard Factors:

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Gallium | 71 | 0.989 | 0.983 | 0.984 | **0.989** | n/a | n/a |
| Lutetium | 175 | 1.019 | 1.052 | 1.023 | **1.019** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 04-02-09D
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: [redacted]
STARLIMS # 148620

| Sample Name: | | CCV2 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 4/2/09 13:32 | | | | | |
| Copper | 63 | 25.4 | 24.97 | 25.42 | **25.27** | 0.255 | 1.009 |
| Copper | 65 | 25.23 | 24.79 | 25.41 | **25.14** | 0.3223 | 1.282 |
| Lead | 206 | 25.03 | 24.81 | 25.91 | **25.25** | 0.5808 | 2.3 |
| Lead | 207 | 24.84 | 24.14 | 25.13 | **24.71** | 0.5094 | 2.062 |
| Lead | 208 | 24.8 | 24.44 | 25.45 | **24.89** | 0.5149 | 2.068 |
| Zinc | 66 | 25.57 | 24.97 | 25.41 | **25.32** | 0.3103 | 1.226 |
| Zinc | 67 | 25.06 | 25.29 | 25.34 | **25.23** | 0.1452 | 0.5756 |
| Zinc | 68 | 25.37 | 25.45 | 25.34 | **25.38** | 0.0561 | 0.2209 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Gallium | 71 | 0.978 | 0.97 | 0.976 | **0.978** | n/a | n/a |
| Lutetium | 175 | 0.993 | 0.987 | 1.016 | **0.993** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 04-02-09D
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: [redacted]
STARLIMS # 148620

| Sample Name: | | CCB2 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 4/2/09 13:35 | | | | | |
| Copper | 63 | 0.0065 | 0.0087 | 0.0109 | **0.0087** | 0.0022 | 24.99 |
| Copper | 65 | 0.0134 | 0.0098 | 0.0133 | **0.0122** | 0.002 | 16.8 |
| Lead | 206 | 0.0142 | 0.0123 | 0.0148 | **0.0138** | 0.0013 | 9.594 |
| Lead | 207 | 0.014 | 0.0133 | 0.0143 | **0.0139** | 0.0005 | 3.711 |
| Lead | 208 | 0.0118 | 0.0129 | 0.0147 | **0.0131** | 0.0015 | 11.36 |
| Zinc | 66 | 0.0099 | 0.0184 | 0.009 | **0.0124** | 0.0052 | 41.81 |
| Zinc | 67 | 0.0251 | 0.0261 | 0.0547 | **0.0353** | 0.0168 | 47.64 |
| Zinc | 68 | 0.0243 | 0.0218 | 0.0325 | **0.0262** | 0.0056 | 21.47 |

Internal Standard Factors:

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Gallium | 71 | 1.003 | 0.993 | 0.992 | **1.003** | n/a | n/a |
| Lutetium | 175 | 1.013 | 1.013 | 1.014 | **1.013** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 04-02-09D
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: [redacted]
STARLIMS # 148620

| Sample Name: | | K0902663-013 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 4/2/09 13:37 | | | | | |
| Copper | 63 | 2.679 | 2.595 | 2.614 | **2.629** | 0.0442 | 1.679 |
| Copper | 65 | 2.58 | 2.594 | 2.619 | **2.598** | 0.0196 | 0.756 |
| Lead | 206 | 1.823 | 1.911 | 1.883 | **1.872** | 0.0451 | 2.411 |
| Lead | 207 | 1.822 | 1.823 | 1.869 | **1.838** | 0.0267 | 1.453 |
| Lead | 208 | 1.809 | 1.845 | 1.826 | **1.827** | 0.0183 | 0.9987 |
| Zinc | 66 | 9.726 | 9.682 | 9.688 | **9.699** | 0.024 | 0.2472 |
| Zinc | 67 | 10.68 | 10.63 | 10.52 | **10.61** | 0.0846 | 0.7972 |
| Zinc | 68 | 11.04 | 10.9 | 10.94 | **10.96** | 0.0725 | 0.6613 |

Internal Standard Factors:

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Gallium | 71 | 1.051 | 1.033 | 1.035 | **1.051** | n/a | n/a |
| Lutetium | 175 | 1.028 | 1.07 | 1.053 | **1.028** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 04-02-09D
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: [redacted]
STARLIMS # 148620

| Sample Name: | | K0902663-013S | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 4/2/09 13:39 | | | | | |
| Copper | 63 | 21.13 | 20.89 | 21.13 | **21.05** | 0.1396 | 0.663 |
| Copper | 65 | 21.1 | 20.82 | 21.18 | **21.03** | 0.1905 | 0.9058 |
| Lead | 206 | 20.7 | 20.5 | 20.7 | **20.63** | 0.1171 | 0.5676 |
| Lead | 207 | 20.49 | 20.49 | 20.11 | **20.36** | 0.2176 | 1.069 |
| Lead | 208 | 20.41 | 20.29 | 20.09 | **20.26** | 0.1611 | 0.7948 |
| Zinc | 66 | 27.51 | 27.27 | 27.43 | **27.4** | 0.1184 | 0.4319 |
| Zinc | 67 | 28.61 | 28.59 | 28.51 | **28.57** | 0.0542 | 0.1896 |
| Zinc | 68 | 28.71 | 28.46 | 29.03 | **28.73** | 0.2862 | 0.996 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Gallium | 71 | 1.024 | 1.014 | 1.022 | **1.024** | n/a | n/a |
| Lutetium | 175 | 1.038 | 1.041 | 1.022 | **1.038** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 04-02-09D
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: [redacted]
STARLIMS # 148620

| Sample Name: | | K0902663-014 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 4/2/09 13:42 | | | | | |
| Copper | 63 | 2.62 | 2.606 | 2.582 | **2.602** | 0.0191 | 0.7347 |
| Copper | 65 | 2.522 | 2.61 | 2.586 | **2.573** | 0.0451 | 1.755 |
| Lead | 206 | 1.834 | 1.839 | 1.866 | **1.846** | 0.017 | 0.918 |
| Lead | 207 | 1.755 | 1.87 | 1.864 | **1.83** | 0.0647 | 3.534 |
| Lead | 208 | 1.757 | 1.829 | 1.821 | **1.802** | 0.0393 | 2.179 |
| Zinc | 66 | 9.681 | 9.584 | 9.587 | **9.617** | 0.0554 | 0.5762 |
| Zinc | 67 | 10.44 | 10.51 | 10.5 | **10.48** | 0.0406 | 0.3875 |
| Zinc | 68 | 10.77 | 10.9 | 10.66 | **10.78** | 0.1205 | 1.118 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Gallium | 71 | 1.017 | 1.029 | 1.026 | **1.017** | n/a | n/a |
| Lutetium | 175 | 0.983 | 1.023 | 1.04 | **0.983** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 04-02-09D
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: [redacted]
STARLIMS # 148620

| Sample Name: | | K0902663-015 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 4/2/09 13:44 | | | | | |
| Copper | 63 | 2.511 | 2.593 | 2.561 | **2.555** | 0.0411 | 1.611 |
| Copper | 65 | 2.496 | 2.569 | 2.534 | **2.533** | 0.0363 | 1.431 |
| Lead | 206 | 1.823 | 1.887 | 1.818 | **1.843** | 0.0385 | 2.087 |
| Lead | 207 | 1.776 | 1.936 | 1.827 | **1.846** | 0.0816 | 4.421 |
| Lead | 208 | 1.775 | 1.893 | 1.822 | **1.83** | 0.0594 | 3.244 |
| Zinc | 66 | 8.801 | 9.202 | 8.936 | **8.979** | 0.2039 | 2.271 |
| Zinc | 67 | 9.717 | 10.12 | 9.893 | **9.908** | 0.1996 | 2.014 |
| Zinc | 68 | 10.24 | 10.35 | 10.22 | **10.27** | 0.0678 | 0.6597 |

Internal Standard Factors:

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Gallium | 71 | 1.018 | 1.039 | 1.026 | **1.018** | n/a | n/a |
| Lutetium | 175 | 1.009 | 1.065 | 1.038 | **1.009** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 04-02-09D
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: [redacted]
STARLIMS # 148620

| Sample Name: | | K0902663-019 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 4/2/09 13:46 | | | | | |
| Copper | 63 | 3.58 | 3.539 | 3.555 | **3.558** | 0.0204 | 0.5739 |
| Copper | 65 | 3.589 | 3.582 | 3.538 | **3.57** | 0.0278 | 0.7793 |
| Lead | 206 | 0.4752 | 0.4671 | 0.4584 | **0.4669** | 0.0084 | 1.794 |
| Lead | 207 | 0.4643 | 0.4526 | 0.446 | **0.4543** | 0.0093 | 2.039 |
| Lead | 208 | 0.4627 | 0.4475 | 0.4452 | **0.4518** | 0.0095 | 2.106 |
| Zinc | 66 | 13.95 | 14.09 | 14.09 | **14.04** | 0.0832 | 0.5925 |
| Zinc | 67 | 13.11 | 12.87 | 12.74 | **12.91** | 0.1902 | 1.474 |
| Zinc | 68 | 13.81 | 13.75 | 13.67 | **13.74** | 0.0715 | 0.52 |

Internal Standard Factors:

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Gallium | 71 | 0.966 | 0.959 | 0.955 | **0.966** | n/a | n/a |
| Lutetium | 175 | 1.018 | 0.986 | 0.984 | **1.018** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 04-02-09D
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: [redacted]
STARLIMS # 148620

| Sample Name: | | K0902663-019D | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 4/2/09 13:48 | | | | | |
| Copper | 63 | 3.364 | 3.696 | 3.541 | **3.534** | 0.166 | 4.697 |
| Copper | 65 | 3.354 | 3.72 | 3.572 | **3.549** | 0.1841 | 5.189 |
| Lead | 206 | 0.4356 | 0.4723 | 0.4648 | **0.4576** | 0.0194 | 4.235 |
| Lead | 207 | 0.4296 | 0.4525 | 0.4659 | **0.4493** | 0.0184 | 4.084 |
| Lead | 208 | 0.4218 | 0.4628 | 0.4522 | **0.4456** | 0.0213 | 4.778 |
| Zinc | 66 | 13.02 | 14.37 | 13.8 | **13.73** | 0.68 | 4.953 |
| Zinc | 67 | 11.79 | 13.3 | 12.4 | **12.5** | 0.7567 | 6.054 |
| Zinc | 68 | 12.58 | 13.89 | 13.37 | **13.28** | 0.6601 | 4.971 |

**Internal Standard Factors:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Gallium | 71 | 0.927 | 0.971 | 0.959 | **0.927** | n/a | n/a |
| Lutetium | 175 | 0.956 | 1.001 | 0.997 | **0.956** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 04-02-09D
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: [redacted]
STARLIMS # 148620

| Sample Name: | | K0902663-020 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 4/2/09 13:51 | | | | | |
| Copper | 63 | 3.575 | 3.53 | 3.543 | **3.549** | 0.0234 | 0.6587 |
| Copper | 65 | 3.636 | 3.594 | 3.531 | **3.587** | 0.0527 | 1.468 |
| Lead | 206 | 0.4628 | 0.4635 | 0.4579 | **0.4614** | 0.0031 | 0.6641 |
| Lead | 207 | 0.4786 | 0.449 | 0.441 | **0.4562** | 0.0198 | 4.338 |
| Lead | 208 | 0.4578 | 0.45 | 0.4454 | **0.451** | 0.0063 | 1.388 |
| Zinc | 66 | 14.73 | 14.47 | 14.26 | **14.49** | 0.2386 | 1.647 |
| Zinc | 67 | 13.52 | 13.09 | 13.25 | **13.29** | 0.2168 | 1.632 |
| Zinc | 68 | 14.15 | 14.12 | 14.04 | **14.1** | 0.0579 | 0.4103 |

Internal Standard Factors:

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Gallium | 71 | 0.966 | 0.949 | 0.937 | **0.966** | n/a | n/a |
| Lutetium | 175 | 0.996 | 0.985 | 0.985 | **0.996** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 04-02-09D
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: [redacted]
STARLIMS # 148620

| Sample Name: | | K0902663-021 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 4/2/09 13:53 | | | | | |
| Copper | 63 | 3.502 | 3.517 | 3.513 | **3.511** | 0.0077 | 0.2182 |
| Copper | 65 | 3.555 | 3.563 | 3.543 | **3.554** | 0.01 | 0.2813 |
| Lead | 206 | 0.448 | 0.4511 | 0.4405 | **0.4465** | 0.0055 | 1.225 |
| Lead | 207 | 0.4519 | 0.4363 | 0.4504 | **0.4462** | 0.0086 | 1.922 |
| Lead | 208 | 0.4474 | 0.4385 | 0.4418 | **0.4426** | 0.0045 | 1.021 |
| Zinc | 66 | 13.59 | 13.65 | 13.61 | **13.62** | 0.0305 | 0.2237 |
| Zinc | 67 | 12.43 | 12.48 | 12.45 | **12.45** | 0.0274 | 0.2201 |
| Zinc | 68 | 13.19 | 13.01 | 13.21 | **13.14** | 0.1124 | 0.8553 |

Internal Standard Factors:

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Gallium | 71 | 0.949 | 0.944 | 0.942 | **0.949** | n/a | n/a |
| Lutetium | 175 | 0.983 | 0.978 | 0.987 | **0.983** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 04-02-09D
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: [redacted]
STARLIMS # 148620

| Sample Name: | | K0902663-025 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 4/2/09 13:55 | | | | | |
| Copper | 63 | 12.52 | 12.36 | 12.37 | **12.42** | 0.0857 | 0.6904 |
| Copper | 65 | 12.05 | 12.06 | 12.13 | **12.08** | 0.0393 | 0.3251 |
| Lead | 206 | 2.801 | 2.862 | 2.767 | **2.81** | 0.0482 | 1.715 |
| Lead | 207 | 2.739 | 2.709 | 2.752 | **2.733** | 0.0222 | 0.8129 |
| Lead | 208 | 2.719 | 2.76 | 2.732 | **2.737** | 0.0209 | 0.7643 |
| Zinc | 66 | 62.17 | 62.36 | 62.21 | **62.24** | 0.1008 | 0.162 |
| Zinc | 67 | 57.27 | 56.98 | 58.24 | **57.5** | 0.6616 | 1.151 |
| Zinc | 68 | 61.91 | 60.78 | 61.14 | **61.28** | 0.5752 | 0.9387 |

Internal Standard Factors:

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Gallium | 71 | 1.023 | 1.013 | 1.017 | **1.023** | n/a | n/a |
| Lutetium | 175 | 0.995 | 1 | 0.994 | **0.995** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 04-02-09D
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: [redacted]
STARLIMS # 148620

| Sample Name: | | K0902663-025S | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 4/2/09 13:58 | | | | | |
| Copper | 63 | 31.29 | 31.1 | 31.16 | **31.18** | 0.0942 | 0.3022 |
| Copper | 65 | 31.52 | 30.9 | 31.29 | **31.24** | 0.3158 | 1.011 |
| Lead | 206 | 21.59 | 20.95 | 22.05 | **21.53** | 0.556 | 2.582 |
| Lead | 207 | 21.52 | 20.32 | 21.42 | **21.09** | 0.6644 | 3.151 |
| Lead | 208 | 21.67 | 20.76 | 21.47 | **21.3** | 0.4788 | 2.248 |
| Zinc | 66 | 79.41 | 78.43 | 79.1 | **78.98** | 0.5 | 0.633 |
| Zinc | 67 | 74.88 | 74.3 | 75.54 | **74.91** | 0.6168 | 0.8235 |
| Zinc | 68 | 78.41 | 77.42 | 78.47 | **78.1** | 0.5874 | 0.7521 |

Internal Standard Factors:

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Gallium | 71 | 1.019 | 0.989 | 0.998 | **1.019** | n/a | n/a |
| Lutetium | 175 | 1.01 | 0.964 | 0.999 | **1.01** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 04-02-09D
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: [redacted]
STARLIMS # 148620

| Sample Name: | | CCV3 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 4/2/09 14:00 | | | | | |
| Copper | 63 | 25.19 | 24.69 | 25.2 | **25.03** | 0.2931 | 1.171 |
| Copper | 65 | 25.36 | 25.1 | 25.2 | **25.22** | 0.1284 | 0.5093 |
| Lead | 206 | 25.7 | 24.86 | 24.9 | **25.15** | 0.4714 | 1.874 |
| Lead | 207 | 25.33 | 24.49 | 24.97 | **24.93** | 0.4213 | 1.69 |
| Lead | 208 | 25.54 | 24.56 | 24.89 | **25** | 0.4986 | 1.995 |
| Zinc | 66 | 25.45 | 25.22 | 25.31 | **25.33** | 0.1182 | 0.4668 |
| Zinc | 67 | 25.79 | 25.34 | 25.33 | **25.49** | 0.2631 | 1.032 |
| Zinc | 68 | 25.57 | 24.95 | 25.22 | **25.25** | 0.3104 | 1.229 |

Internal Standard Factors:

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Gallium | 71 | 0.953 | 0.935 | 0.942 | **0.953** | n/a | n/a |
| Lutetium | 175 | 0.985 | 0.959 | 0.956 | **0.985** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 04-02-09D
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: [redacted]
STARLIMS # 148620

| Sample Name: | | CCB3 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 4/2/09 14:02 | | | | | |
| Copper | 63 | 0.0176 | 0.0125 | 0.0109 | **0.0137** | 0.0035 | 25.53 |
| Copper | 65 | 0.0114 | 0.0106 | 0.0149 | **0.0123** | 0.0023 | 18.68 |
| Lead | 206 | 0.0167 | 0.0161 | 0.0163 | **0.0163** | 0.0003 | 1.854 |
| Lead | 207 | 0.0119 | 0.0187 | 0.0166 | **0.0157** | 0.0035 | 22.12 |
| Lead | 208 | 0.0154 | 0.0154 | 0.0154 | **0.0154** | 0 | 0.068 |
| Zinc | 66 | 0.015 | 0.0134 | 0.015 | **0.0145** | 0.0009 | 6.554 |
| Zinc | 67 | 0.0435 | 0.0503 | 0.0402 | **0.0447** | 0.0052 | 11.54 |
| Zinc | 68 | 0.0265 | 0.0175 | 0.0221 | **0.022** | 0.0045 | 20.4 |

Internal Standard Factors:

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Gallium | 71 | 0.948 | 0.947 | 0.948 | **0.948** | n/a | n/a |
| Lutetium | 175 | 0.969 | 0.964 | 1.001 | **0.969** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 04-02-09D
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: [redacted]
STARLIMS # 148620

| Sample Name: | | K0902663-026 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 4/2/09 14:04 | | | | | |
| Copper | 63 | 12.43 | 12.67 | 12.27 | **12.45** | 0.2033 | 1.632 |
| Copper | 65 | 12.14 | 12.2 | 11.89 | **12.08** | 0.1637 | 1.355 |
| Lead | 206 | 2.799 | 2.748 | 2.894 | **2.814** | 0.0739 | 2.627 |
| Lead | 207 | 2.698 | 2.57 | 2.754 | **2.674** | 0.0944 | 3.529 |
| Lead | 208 | 2.738 | 2.658 | 2.787 | **2.728** | 0.0649 | 2.38 |
| Zinc | 66 | 60.61 | 61.82 | 60.28 | **60.9** | 0.8134 | 1.335 |
| Zinc | 67 | 55.81 | 56.52 | 55.9 | **56.08** | 0.3874 | 0.6908 |
| Zinc | 68 | 60.02 | 60.14 | 59.37 | **59.84** | 0.4102 | 0.6854 |

Internal Standard
Factors:

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Gallium | 71 | 1.021 | 1.024 | 0.997 | **1.021** | n/a | n/a |
| Lutetium | 175 | 1.009 | 0.986 | 1.019 | **1.009** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 04-02-09D
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: [redacted]
STARLIMS # 148620

| Sample Name: | | K0902663-027 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 4/2/09 14:07 | | | | | |
| Copper | 63 | 12.36 | 12.64 | 12.59 | **12.53** | 0.1492 | 1.191 |
| Copper | 65 | 12.11 | 12.22 | 12.37 | **12.23** | 0.1304 | 1.066 |
| Lead | 206 | 2.801 | 2.788 | 2.907 | **2.832** | 0.0653 | 2.305 |
| Lead | 207 | 2.694 | 2.69 | 2.785 | **2.723** | 0.0538 | 1.976 |
| Lead | 208 | 2.725 | 2.721 | 2.784 | **2.743** | 0.035 | 1.274 |
| Zinc | 66 | 60.83 | 62.22 | 62.54 | **61.87** | 0.9086 | 1.469 |
| Zinc | 67 | 56.4 | 57.06 | 58.56 | **57.34** | 1.106 | 1.929 |
| Zinc | 68 | 60.44 | 61.55 | 61.48 | **61.16** | 0.6231 | 1.019 |

Internal Standard Factors:

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Gallium | 71 | 1.015 | 1.015 | 1.024 | **1.015** | n/a | n/a |
| Lutetium | 175 | 1.003 | 1.011 | 1.027 | **1.003** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 04-02-09D
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: [redacted]
STARLIMS # 148620

| Sample Name: | | K0902663-031 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 4/2/09 14:09 | | | | | |
| Copper | 63 | 1.669 | 1.641 | 1.621 | **1.644** | 0.0242 | 1.472 |
| Copper | 65 | 1.6 | 1.61 | 1.588 | **1.599** | 0.0113 | 0.7042 |
| Lead | 206 | 0.1792 | 0.1872 | 0.1897 | **0.1853** | 0.0055 | 2.956 |
| Lead | 207 | 0.1705 | 0.1854 | 0.1764 | **0.1775** | 0.0075 | 4.225 |
| Lead | 208 | 0.1795 | 0.1825 | 0.1785 | **0.1802** | 0.0021 | 1.166 |
| Zinc | 66 | 4.24 | 4.241 | 4.208 | **4.23** | 0.0185 | 0.4365 |
| Zinc | 67 | 5.556 | 5.635 | 5.569 | **5.587** | 0.0428 | 0.7662 |
| Zinc | 68 | 5.555 | 5.564 | 5.552 | **5.557** | 0.006 | 0.1075 |

Internal Standard Factors:

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Gallium | 71 | 1.033 | 1.028 | 1.013 | **1.033** | n/a | n/a |
| Lutetium | 175 | 0.998 | 1.031 | 1.004 | **0.998** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 04-02-09D
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: [redacted]
STARLIMS # 148620

| Sample Name: | | K0902663-032 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 4/2/09 14:11 | | | | | |
| Copper | 63 | 1.676 | 1.644 | 1.664 | **1.661** | 0.0161 | 0.9711 |
| Copper | 65 | 1.664 | 1.627 | 1.619 | **1.637** | 0.0239 | 1.459 |
| Lead | 206 | 0.1959 | 0.1941 | 0.1928 | **0.1943** | 0.0016 | 0.7995 |
| Lead | 207 | 0.1862 | 0.1972 | 0.2027 | **0.1953** | 0.0084 | 4.289 |
| Lead | 208 | 0.1858 | 0.1856 | 0.1925 | **0.188** | 0.0039 | 2.091 |
| Zinc | 66 | 4.288 | 4.164 | 4.244 | **4.232** | 0.0628 | 1.485 |
| Zinc | 67 | 5.577 | 5.464 | 5.587 | **5.543** | 0.0683 | 1.231 |
| Zinc | 68 | 5.65 | 5.481 | 5.632 | **5.588** | 0.0931 | 1.665 |

Internal Standard Factors:

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Gallium | 71 | 1.042 | 1.021 | 1.028 | **1.042** | n/a | n/a |
| Lutetium | 175 | 1.049 | 1.05 | 1.038 | **1.049** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 04-02-09D
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: [redacted]
STARLIMS # 148620

| Sample Name: | | K0902663-033 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 4/2/09 14:14 | | | | | |
| Copper | 63 | 1.753 | 1.65 | 1.656 | **1.686** | 0.0578 | 3.43 |
| Copper | 65 | 1.692 | 1.623 | 1.626 | **1.647** | 0.0389 | 2.36 |
| Lead | 206 | 0.2026 | 0.1788 | 0.198 | **0.1931** | 0.0127 | 6.556 |
| Lead | 207 | 0.1855 | 0.1712 | 0.1755 | **0.1774** | 0.0073 | 4.131 |
| Lead | 208 | 0.1931 | 0.1776 | 0.1835 | **0.1847** | 0.0078 | 4.225 |
| Zinc | 66 | 4.185 | 3.958 | 3.951 | **4.031** | 0.133 | 3.3 |
| Zinc | 67 | 5.384 | 5.327 | 5.275 | **5.329** | 0.0546 | 1.024 |
| Zinc | 68 | 5.543 | 5.299 | 5.269 | **5.37** | 0.1503 | 2.799 |

Internal Standard
Factors:

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Gallium | 71 | 1.058 | 1.027 | 1.024 | **1.058** | n/a | n/a |
| Lutetium | 175 | 1.042 | 1.023 | 1.014 | **1.042** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 04-02-09D
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: [redacted]
STARLIMS # 148620

| Sample Name: | | CCV4 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 4/2/09 14:16 | | | | | |
| Copper | 63 | 24.88 | 24.91 | 25.14 | **24.98** | 0.1422 | 0.5694 |
| Copper | 65 | 24.84 | 24.92 | 24.97 | **24.91** | 0.0671 | 0.2693 |
| Lead | 206 | 25.2 | 25.68 | 25.66 | **25.51** | 0.2712 | 1.063 |
| Lead | 207 | 24.84 | 24.93 | 24.91 | **24.89** | 0.049 | 0.1968 |
| Lead | 208 | 24.83 | 25.02 | 25.03 | **24.96** | 0.1146 | 0.459 |
| Zinc | 66 | 24.93 | 25.25 | 25.32 | **25.17** | 0.2076 | 0.825 |
| Zinc | 67 | 25.35 | 25.38 | 25.29 | **25.34** | 0.0467 | 0.1843 |
| Zinc | 68 | 25.23 | 25.47 | 25.2 | **25.3** | 0.1454 | 0.5748 |

Internal Standard Factors:

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Gallium | 71 | 0.943 | 0.941 | 0.938 | **0.943** | n/a | n/a |
| Lutetium | 175 | 0.97 | 0.97 | 0.963 | **0.97** | n/a | n/a |

Instrument ID: K-ICP-MS-02
Experiment: 04-02-09D
Units: µg/L (ppb)

Method: EPA 200.8
Analyst: [redacted]
STARLIMS # 148620

| Sample Name: | | CCB4 | | | Mean | SD | %RSD |
|---|---|---|---|---|---|---|---|
| TimeStamp | | 4/2/09 14:18 | | | | | |
| Copper | 63 | 0.0112 | 0.0165 | 0.0099 | **0.0125** | 0.0035 | 28.02 |
| Copper | 65 | 0.0092 | 0.0129 | 0.0136 | **0.0119** | 0.0024 | 20.12 |
| Lead | 206 | 0.0148 | 0.0123 | 0.0118 | **0.013** | 0.0016 | 12.4 |
| Lead | 207 | 0.0156 | 0.0132 | 0.0151 | **0.0146** | 0.0013 | 8.855 |
| Lead | 208 | 0.0149 | 0.0137 | 0.0137 | **0.0141** | 0.0007 | 4.951 |
| Zinc | 66 | 0.0151 | 0.018 | -0.0019 | **0.0104** | 0.0107 | 103.3 |
| Zinc | 67 | 0.0327 | 0.0122 | 0.0436 | **0.0295** | 0.016 | 54.07 |
| Zinc | 68 | 0.0044 | 0.0288 | 0.0158 | **0.0164** | 0.0122 | 74.68 |

Internal Standard Factors:

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Gallium | 71 | 0.959 | 0.97 | 0.955 | **0.959** | n/a | n/a |
| Lutetium | 175 | 0.983 | 0.991 | 0.986 | **0.983** | n/a | n/a |